Comments and Recommendations

of

The Board of Union Township Trustees
Butler County, Ohio

on the

Proposed Plan for the Clean Up

of the

"Skinner Landfill Site
West Chester, Ohio

9 June 1992

Background: The various considerations and options for the proposed clean up of the Skinner Landfill have been a topic of community discussion for quite some time. A number of "Public Information" meetings have been held on the topic of the landfill and various proposals to "clean it up".

A number of organizations are involved in the effort each with their own unique role. The USEPA has the primary lead agency role, and has designated the site as a "USEPA Hazardous Waste Superfund Cleanup Site". The information exchange between these various agencies has been inconsistent ranging from "excellent" to "almost non-existent".

On 20 April 1992 the USEPA released a 24 page report (attached hereto as enclosure 1) outlining the history of the site, some considerations of the proposed cleanup effort, including 5 cleanup alternatives, and recommendations on how USEPA desires to proceed.

On 20 May 1992 USEPA conducted a "Public Hearing" at the Township building for the purpose of answering questions about the 24 page report; and receiving public comments on the recommendations contained therein.

Comments on the report of the Public Hearing will be received and considered by USEPA until 13 July 1992.

As a result of the Public Meeting held on 20 May 1992, the Township Administrator communicated to the Board of Trustees that a considerable number of questions still remained to be answered; and that by and large, regardless of the quality of the job being done, public confidence in the efforts underway by USEPA was lacking.

At the regular meeting of the Board of Union Township Trustees held on May 26, 1992 certain members of the public voiced those same general concerns. Additionally on 28 May 1992 Congressman John A. Boehner communicated similar concerns to USEPA in a letter (copy attached as enclosure 2).

The Board of Union Township Trustees directed the Township Administrator to meet with staff and compile a report that communicates specific items of inquiry to be directed to USEPA in conjunction with the cleanup of the Skinner Landfill. Further, the Board directed the Administrator to limit staff's comments to the "process" and the townships role in that process, and to "not attempt to evaluate the feasibilities of the various alternatives proposed by USEPA".

The Staff met shortly following the Trustee's meeting and discussed the material available to date. Additionally, information was provided to the staff concerning the background of the cleanup effort and "how we got to the point that we are today".

On 9 June 1992 in a Public Meeting, the Township Administrator presented his Staff Report to the Board of Union Township Trustees and presented the same in writing to the board.

After discussion by the Board, and recommendations by the Board for additional comments to be incorporated into the report, the Board of Union Township Trustees voted unanimously with two members present to adopt the Staff report, with changes as its "Comment and Recommendations on the Proposed Plan for the Clean Up of the "Skinner Landfill Site West Chester, Ohio".

Those comments and recommendations follow:

General Recommendations On the Process:

1. Not all of the questions posed to the USEPA Officials on 20 May 1992 were answered. Some of the questions were answered incompletely. It seemed that some USEPA officials who could have answered some of the questions were not present. With the exception of the person asking the questions, none of the public will ever know the answer to some of the questions unless some effort is made to publicly share the answers provided.

It is difficult to understand how anyone would be able to make informed and constructive comments on the various proposed alternatives until one knows the answers to a lot of the questions that were asked.

It is therefore recommended that USEPA provide answers to the questions that were asked on 20 May in the form of a supplemental report which could be disseminated to the public; and that following dissemination of that report after allowing a suitable time for analysis, another Community Meeting should be scheduled to allow further public comment. (A transcript of the meeting is provided as enclosure 3)

2. The published 24 page report contained a thorough analysis of only the one proposed cleanup option that is being recommended by USEPA. In order for informed public comment to be made; the thorough analysis of the other 4 cleanup options needs to be made available to the public.

3. The "process" of reaching actual cleanup is confusing. USEPA should publish a "Gant Chart" or a "Cleanup Time Table" containing the steps to be taken to achieve remediation showing the respective dates. Some effort needs to be made to communicate which of those dates are "hard" or "soft" (changeable or non-changeable).

4. The USATSDR (a "sister agency to USEPA) is conducting some type of health assessment pertaining to the site. This assessment is being done in conjunction with the Ohio Department of Health.

The efforts of USEPA and ATSDR do not appear to be "joint". It appears that USEPA is proceeding with its decision making process without the benefit of the input from ATSDR; and that ATSDR is engaged in an independent study that may have little or no utility to USEPA's remediation efforts. USEPA is proceeding without benefit of ATSDR's findings.

It is requested that both USEPA and ATSDR integrate their efforts to avoid duplication of efforts and to both benefit from each other's findings. It is requested that the USEPA delay decision on the selection of a cleanup alternative until such time as the ATSDR is available and incorporated into the decision making process.

5. Federal regulations seem to require USEPA to comply with all applicable state and local regulations that may apply to the method of cleanup selected. Some of these regulations deal with placement of equipment in proximity to residences, schools, places of assembly, etc ...

We recommend that all applicable state and local regulations be followed without waiver; and that when state and federal regulations are inconsistent with each other - that the stricter one apply.

Safety Issues: Safety is a primary concern of the staff. The following concerns express our concerns for safety related issues.

6. Once the cleanup effort begins; What will be required or expected from the local government regarding safety, security, and emergency services? What, if any of those services will be provided by USEPA?

7. What is expected of the local fire and EMS?

8. Will the clean up contractor have a response team on site?

9. If material is removed from the site, who will handle a leak or spill off site?

10. What and Who will transport exposed cleanup company personnel if required.

11. If our personnel are exposed, who will pay for blood work-ups and long term monitoring, if necessary?

12. If major problems / incident occurs; Who will notify whom? Who will notify local authorities? How will the local community be notified?

13. If a cave-in occurs at the excavation site; who will perform personnel extrication?

14. Who will provide protective equipment and training for local authorities who require access to the site?

15. The presence of DOD Ordnance on-site has been strongly suggested. What has been done to thoroughly investigate this possibility? What contingencies exist to deal with ordnance if it is discovered?

16. Will USEPA meet at some point with local officials to discuss these concerns and to develop training routines and contingency and response plans that address these issues?

17. The site is currently inadequately posted, allowing unsuspecting trespassers to wander onto the site. We recommend the site be more conspicuously posted, and that further, as soon as possible, the entire site be fenced off to prevent further unknowing entry.

18. It is our opinion that any persons in proximity to the site that are still on well water, be taken off well water prior to commencement of the cleanup effort.

The foregoing represents our identifiable concerns to date. After these questions are answered, the answers themselves will undoubtedly spark further questions.

Knowing this, our final recommendation is that continuous meaningful dialog be established between USEPA and the local government; that it continue throughout the process; that local officials be empowered to enter the site during the cleanup; and that a system be developed and maintained to respond to complaints emanating from the cleanup effort.

David R. Gully

David R. Gully, Administrator
Union Township, Butler County, Ohio

3 enclosures
as stated

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

April 20, 1992

Ms. Nel Kilpatrick
Union Township Administrative Building
9113 Cincinnati-Dayton Road
West Chester, Ohio 45069

Dear Ms. Kilpatrick:

The U.S. Environmental Protection Agency (U.S. EPA), the Ohio EPA (OEPA) and our contractors have completed a Remedial Investigation (RI), Baseline Risk Assessment (RA), and Feasibility Study (FS) of the Skinner Landfill Superfund site.

Per our discussion, please find enclosed a copy of the Proposed Plan for your review. We invite you to share your views about the recommended cleanup plan and the other alternatives presented in the Feasibility Study, and consider them valuable in helping select a final cleanup for the site.

We appreciate your offer to make copies of this document to distribute to your Trustees for their review. We would also like to thank you for your insight and input in the scheduling and review time for this document. In consideration of your suggestions we have scheduled the public meeting for May 20, 1992 at the Union Township Hall beginning at 7 p.m.

If you should have any additional questions about the Skinner Landfill Superfund site, please contact us.

Sincerely,

Sheila A. Sullivan
Remedial Project Manager
U.S. EPA
312/886-5251

Cheryl L. Allen
Community Relations Coordinator
U.S. EPA
312/353-6196

PROPOSED PLAN FOR THE SKINNER LANDFILL SITE, WEST CHESTER, OHIO

I. Introduction

This Proposed Plan identifies the preferred option for cleaning up the contamination at the Skinner Landfill site. In addition, the Plan summarizes other alternatives that were considered and analyzed for this site. This document is issued by the U.S. Environmental Protection Agency (EPA), the lead agency for site activities, and the Ohio Environmental Protection Agency (OEPA), the support agency for this response action. The U.S. EPA, in consultation with OEPA, will select a final remedy for the site only after the public comment period has ended and the information submitted during this time has been reviewed and considered.

EPA is issuing this Proposed Plan as part of its public participation responsibilities under section 117(a) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The purpose of this Proposed Plan document is specifically to: identify the preferred alternative for remedial action at the site and the rationale therein; describe the other remedial options that were considered by the agencies in the Feasibility Study (FS) report; solicit public review and comment on all the alternatives described in the FS; and, provide information on how the public can be involved in the remedy selection process.

This document is intended to merely summarize and highlight key information which is presented in greater detail in the Remedial Investigation (RI) and FS reports, and other site documents contained in the administrative record file for this site. Therefore, EPA and the OEPA encourage the public to review these other documents to gain a more comprehensive understanding of the site and Superfund activities that have been conducted there. Information about the locations of these document repositories is located on page 21 of this Proposed Plan document.

EPA, in consultation with the OEPA, may modify the preferred alternative or select a different response action as the final remedial action plan for the site, based on new information, arguments or comments submitted during the public comment period. Therefore, the public is encouraged to review and comment on all the alternatives identified in this Plan.

II. Site Background

The Skinner Landfill is located approximately 15 miles north of Cincinnati, Ohio, in Section 22 of Butler County (see Figure 1)

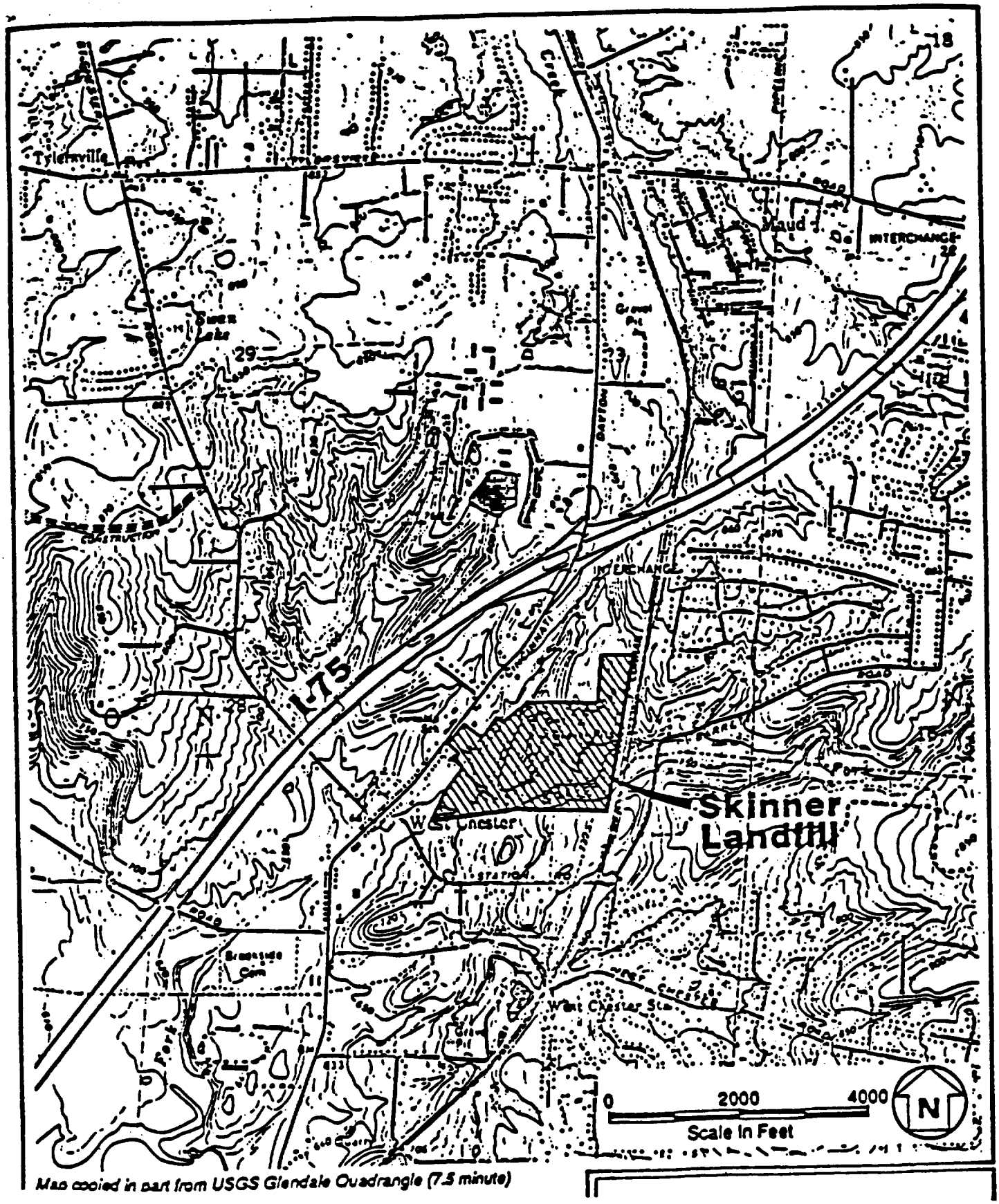

FIGURE 1

LOCATION OF SKINNER LANDFILL

and is situated approximately one-half mile south of the intersection of Interstate 75 and the Cincinnati-Dayton Road, and one-half mile north of the town of West Chester.

The Skinner property is comprised of nearly 78 acres of hilly terrain, bordered on the immediate south by the East Fork of Mill Creek. The site is bordered to the north by woods and old fields, to the east by a Consolidated Rail Corporation (Conrail) right-of-way, to the south across the East Fork of Mill Creek by agricultural and wooded land and to the west by the Cincinnati-Dayton Road. The principal residential area is west of the landfill; however, approximately 13 residences are located within 2,000 feet of the landfill to the south, and west. A residential area is also located approximately 0.5 miles east of the landfill (see Figure 2).

The property, originally used as a sand and gravel operation, first became involved in landfill operations in 1934 with the disposal of general municipal refuse in abandoned sand and gravel pits. It is unknown exactly what materials were deposited in the landfill from 1934 until the present. In 1959, the landfill was used for the disposal of scrap metal and general trash from a paper manufacturing plant. In the spring of 1963, the Butler County Board of Health approved the use of the site as a sanitary landfill. However, during the permitting procedure, local residents opposed the landfill, stating that chemical wastes were being dumped there.

In April of 1976, numerous citizen complaints and the observation of a black, oily liquid in a waste lagoon on the site prompted the OEPA to investigate the Skinner Landfill. This and subsequent visits showed evidence of a waste lagoon occupying about 1.5 acres, and several hundred drums scattered throughout the site. Mr. Albert Skinner has also stated that nerve gas, mustard gas, incendiary bombs, phosphorus, flame throwers, cyanide ash and explosive devices were buried at the landfill.

Analysis of samples taken from a trench excavated at the lagoon site revealed pesticides, some volatile organic compounds and elevated concentrations of several heavy metals. In January 1979, the court prohibited future disposal of industrial waste at this site except under legal permit.

In 1982, as a result of a Field Investigation Team (FIT) investigation, which revealed volatile organic compounds in ground water southeast of the buried lagoon, the Skinner Landfill was placed on the National Priority List (NPL) with a ranking of 659. This action prompted the initiation of a RI/FS with Phase I activities commenced by EPA in the Spring of 1986. This initial investigation included a geophysical survey, and the sampling of ground water, surface water, and soils. A biological survey of the diversity of fish and macroinvertebrate fauna collected from

SITE MAP
Skinner Landfill

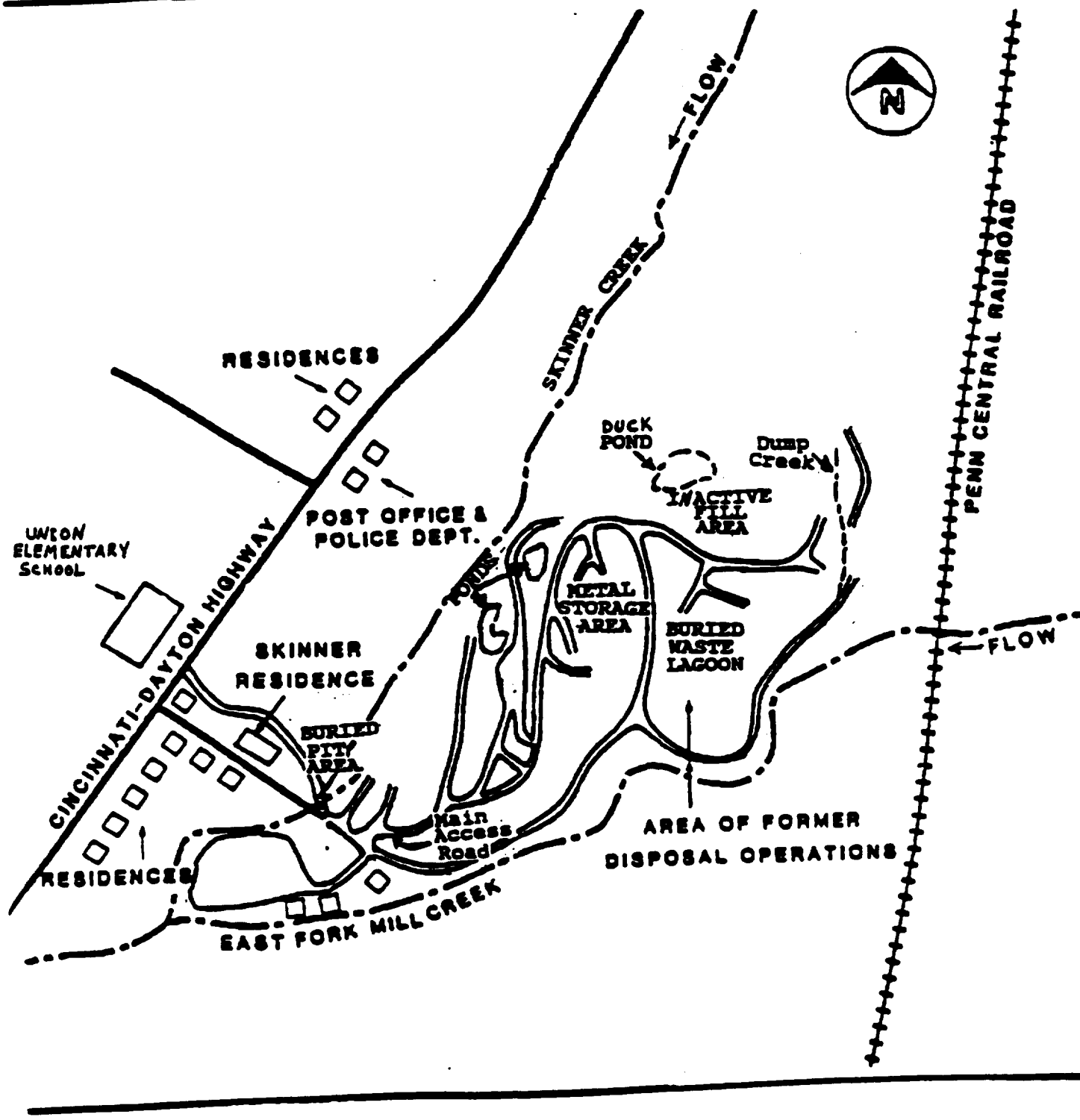

FIGURE 2

the East Fork of Mill Creek and Skinner Creek was performed.

Phase II of the RI/FS commenced in 1989 and further investigated the ground water, surface water, soils and sediments at the site. The predominant areas of investigation outside the landfill included residential wells near the landfill and the East Fork of Mill Creek upstream and downstream of the site. The OEPA achieved site closure to all landfilling activities in August 1990. The landfill currently covers about 10 acres.

III. Summary of Site Risks

Because the Skinner Landfill accepted a variety of wastes since 1934 until it was closed in 1990, numerous chemicals have been detected at the site. Following the RI, an analysis was conducted to estimate the potential health or environmental problems that could result if the site was not cleaned up. This analysis is referred to as the Baseline Risk Assessment (RA). In this assessment, approximately 166 contaminants representing essentially all classes of chemicals including: inorganic, volatile and semi-volatile organic, pesticides, polychlorinated biphenyls (PCBs), polynuclear aromatic hydrocarbons (PAHs), dioxins and furans were evaluated for carrying through the risk assessment. Of these, 114 contaminants were retained from these chemical classes for use in assessing site risks. These chemicals can be found on Table 3-1 of the RA Report. Those contaminants contributing the most significantly to current and future site risks included: volatile organics such as carbon tetrachloride, vinyl chloride, benzene, chloroform, dichloroethene and bis (2-chloroethyl) ether; pesticides such as heptachlor, aldrin, dieldrin, chlordane, chlordene, and hexachlorobenzene; PCBs, specifically Arochlor 1254, and inorganics such as arsenic and cobalt.

The most highly contaminated media included the soils of the buried waste lagoon. Lower levels of contamination were found in the remaining site-wide soils which included the buried pit area. Lower levels of contamination were also found in the ground water and in the sediments in Mill Creek, Skinner Creek, and the Duck and Diving Ponds. Additional contamination may be from drums located north of the buried waste lagoon which were sampled in 1976 and 1986.

The remaining portions of the landfill contain smaller quantities of solid and industrial waste mixed with larger quantities of demolition materials. However, ground water monitoring wells located within the landfill indicate that the landfill is also a source of contamination. Leachate is created at this site when rain water or melting snow percolates through the waste lagoon and landfill. The majority of compounds in the waste lagoon are largely immobile, because they bind tightly to the clayey soils

below the waste lagoon and are not dissolved by water. However, mobile VOC compounds in permeable zones beneath the waste lagoon have been detected. These compounds are apparently mobile in the water table and in perched ground water zones above impermeable layers. Contamination of the bedrock layer was minimal.

The majority of ground water contamination in the unconsolidated sediments appears to originate from within the buried waste lagoon. Additional sources may exist to the north and east of the buried waste lagoon as well as upgradient of the Skinner production well in the buried valley. Two wells located immediately adjacent to, and downgradient from, the lagoon are the most impacted. These wells contain a wide variety of contaminants with the majority being volatile organic and chlorinated semi-volatile organic compounds. Three wells located within the landfill indicated elevated levels of primarily benzene. Ground water monitoring wells located downgradient of the waste lagoon and landfill, and adjacent to the East Fork of Mill Creek, show considerably fewer contaminants and at much lower concentrations.

Surface water contamination is minimal in all ponds and creeks. However, pond and creek sediments contain low levels of some semi-volatile organic compounds, PCBs, arsenic, and pesticides. The most likely reason for the contamination is due to surface water runoff from the site.

The potential migration pathways for these contaminants include leaching from the soils to the ground water, movement of contaminated ground water to surface water and sediments, and volatilization of chemicals to air from water and soils. Sampling has indicated that concentrations of volatile chemicals in surface soils and water do not represent a significant source of concern for air. Additionally, the depth of contaminated soils in the waste lagoon limits emissions of these chemicals to air.

The only evidence of contaminants potentially leaving the site through ground water migration was the detection of ethylbenzene at low levels located across the East Fork of Mill Creek from the buried lagoon. The only potential off-site routes of migration for surface water and surface water sediments are through the East Fork of Mill Creek and Skinner Creek. The leachate seeps and ground water discharges into the East Fork of Mill Creek appear to originate from within the buried waste lagoon and clearly indicate a pathway for off-site migration of contaminants.

The RA showed that the potential routes of current and future exposure include: ingestion of and direct contact with contaminated soils; ingestion of affected ground water; dermal contact with ground water; inhalation of chemicals that

volatilize from ground water to air during showering; and, ingestion of and direct contact with surface water and sediments during recreational activities. Inhalation of fugitive dust and volatile chemicals was also evaluated qualitatively as a potential exposure route but did not warrant a quantitative assessment because emissions from surface soil would likely be low. This is because the most contaminated portion of the site, the buried waste lagoon, is beneath 40 feet of demolition debris and is not considered a source of air risk under the current conditions.

Risks at Superfund sites are typically assessed with respect to both carcinogenic and noncarcinogenic adverse effects of a chemical under current and future exposure scenarios. The current and potentially exposed populations are occupational workers at the site, residents living on and near the site, and persons who may recreate in the area. Cancer risks from various exposure pathways are assumed to be additive. The RA showed that currently none of the residents living, working, recreating, or attending school near the site are exposed to any site-related risks considered unacceptable by the U.S. EPA. Unacceptable risks are those that may result in one additional cancer case in 10,000 to 1,000,000 people exposed over a lifetime (70 years). However, the risks to persons currently living, working or recreating on the site are considered unacceptable in that they exceed one additional cancer case in 100 persons exposed over a lifetime.

The primary future potentially exposed populations are residential, recreational and occupational. The risks for the future potentially exposed residential population were assessed using both the assumptions that the waste lagoon was and was not developed for residential use. The future risks calculated for persons living working or recreating at the site were considered unacceptable in that they exceeded U.S. EPA's acceptable risk range. The risks under the assumption that the waste lagoon is developed for future residential use exceeded one additional cancer case in 100. The risks under the assumption that the waste lagoon was not developed for future residential use were slightly lower, but still exceeded one in 1,000.

The noncancer risks are evaluated with respect to a hazard quotient, which is the ratio of the level of exposure to an acceptable level. If the hazard quotient for an exposed individual or group exceeds 1.0 for a particular chemical, there may be noncancer health effects resulting from the exposure to that chemical. If the hazard index, which is the sum of the hazard quotients for all chemicals in a particular medium, exceeds 1.0 there may be a concern for potential health effects from exposure to that medium. The RA showed that the hazard indices at the Skinner site exceeded 1.0, suggesting that both current and future exposures to chemicals of concern on the site

may result in excess noncancer risks to all populations. Releases of hazardous substances from this site, if not addressed by the preferred alternative or one of the other measures discussed in this plan, may present an imminent and substantial endangerment to public health, welfare, and the environment.

IV. Scope and Role of Response Action

CERCLA provides a preference for achieving protection of human health and the environment through treatment which permanently and significantly reduces the volume, toxicity, or mobility of hazardous substances, pollutants and contaminants over remedial action not involving such treatment.

The preamble to the National Contingency Plan (NCP), March 8, 1990, states that treatment is the preferred alternative for the remediation of hazardous wastes. However, the NCP identifies the municipal landfill as a type of site where treatment of principal threats may not always be practicable due to difficulties in treating the volume or types of waste involved. Another difficulty could be short-term risks associated with the treatment remedy.

Principal threat wastes are those source materials considered to be highly toxic or highly mobile that generally cannot be reliably contained or would present a significant risk to human health or the environment should exposure occur. They include liquids, highly mobile materials (e.g. solvents), or materials having high concentrations of toxic compounds.

According to the February 1991 guidance, "Conducting Remedial Investigation/Feasibility Studies for CERCLA Municipal Landfill Sites", treatment of hot spots within a landfill may be considered practicable when wastes are in discrete, accessible locations of the landfill and present a potential principal threat to human health and the environment.

The preamble to the NCP also states that solutions will most often involve a combination of methods of providing protection, including treatment and engineering controls and institutional controls.

V. Cleanup Objectives

Waste Lagoon

Based on interviews conducted by U.S. EPA, OEPA file information and RI data, it appears that the waste lagoon was the primary dumping area for hazardous waste or waste containing hazardous substances from 1955 to 1976. Furthermore, 55-gallon drums are

buried near the vicinity of the waste as witnessed by OEPA in 1976. Based upon geophysical surveys conducted under Phase 1 and aerial photos of the site in 1976, it appears possible that as many as 7,000 drums of waste could be buried in this area.

The waste lagoon sediments contain highly toxic compounds including various pesticides, dioxins and furans. Also, based on limited data from the OEPA inspection in 1976, the buried drums contain liquid and non-liquid solvent and pesticide wastes. Furthermore, waste lagoon sediments contain various mobile solvent compounds. Based on the RI data to date, compounds associated with solvents are migrating from the waste lagoon and discharging to Mill Creek. Significant migration has been hindered, to date, by the clayey soils under most of the waste lagoon and because the waste lagoon is normally wholly above the water table. Current data also suggests, however, that at some time in the past, significant amounts of contaminants may have migrated to the East Fork of Mill Creek through sand and gravel layers in contact with the southern end of the waste lagoon.

According to the RA Report, incremental cancer risks associated with future exposure to the waste lagoon sediments under a residential scenario are estimated to be as high as 2.0×10^{-2}. Incremental cancer risk under a future recreational exposure scenario are estimated to be as high as 1.6×10^{-2}. The RA also indicates potential future migration of contaminants from the waste lagoon area to ground water and the East Fork of Mill Creek at higher quantities than what is currently being released.

The waste lagoon sediments and drum contents are potential principal threats due to their highly toxic and mobile nature. Thus, treatment and/or containment of the principal threats were carried forward through detailed analysis. The cleanup objective for the waste lagoon is as follows:

- To address principal threats, minimize release of contaminants to groundwater, and minimize direct contact threat by removal and treatment and/or containment of hot spots.

Landfill Contents

As stated earlier it appears that the waste lagoon was primarily used to dump hazardous wastes. The remaining property used as a landfill was not purchased until 1963. Based on visual inspection and site records, it appears the landfill area was used to dump primarily solid and demolition waste mixed with much smaller quantities of industrial/hazardous waste. Because the landfill area is composed of municipal waste and to a lesser extent hazardous waste, it poses a low-level threat rather than a principal threat. The volume and heterogeneity of the landfill

waste, as is the case with most CERCLA municipal landfills, make treatment impractical; therefore, containment of the landfill contents was carried forward through detailed analysis. The cleanup objective for the landfill contents is as follows:

- Minimize releases of contaminants to groundwater and minimize direct contact threat by treatment and/or containment of the landfill contents and removal of hotspots.

Soils Outside of Buried waste Lagoon Area

Because chemical-specific ARARs for soil have not been developed, remedial action levels have been developed and proposed based on risk-based criteria, U.S. EPA guidance and water quality ARARs. Water quality ARARs are used because remedial action objectives for soils must also be protective of ground water. Soil contamination is not acceptable at concentrations where leaching of contaminants from soils to ground water can create ground water contamination exceeding the remedial action levels proposed for this site.

These remedial action levels were developed based on a comparison between soil concentrations which are protective of ground water and risk-based standards for soils generated in the Baseline Risk Assessment. The more stringent of these two concentrations were proposed as remedial action levels. The proposed remedial action objective for onsite soils outside of the buried waste lagoon is the following:

- Reduce contaminant leaching from onsite soils in the areas containing contaminants at concentrations above proposed remedial action levels; and, minimize direct contact threat.

Ground Water/Landfill Leachate

Maximum concentrations of contaminants considered acceptable in ground water and leachate were determined from comparisons of risk-based acceptable concentrations and site ARARs. Where both risk-based maximum acceptable concentrations and ARARs could be established for a given contaminant, the most stringent was applied. Site ground water, particularly in the vicinity of the buried waste lagoon, has been impacted by contaminants. Ground water discharge to surface water occurs in the form of springs and seeps along creek valley walls. Leachate seeps also occur along valley walls. For the purposes of evaluating and implementing remedial actions, no distinction was made between impacted ground water and landfill leachate at this site; therefore, ground water and landfill leachate have been treated as a single medium.

Remedial action objectives for ground water and landfill leachate are proposed as follows:

- Containment and/or capture of all ground water and landfill leachate containing contaminant concentrations exceeding the proposed remedial action levels which would result in an excess lifetime cancer risk exceeding 10^{-6}, or would result in a cumulative hazard index exceeding 1.0.

- Minimize the volume of ground water in which contaminant concentrations exceed the remedial action levels by minimizing contact of unimpacted water with impacted ground water and soils.

- Minimize migration of dissolved vapor phase ground water contaminants via engineering controls.

Surface Water

Surface water contamination has been primarily attributable to leachate seeps; however, no contamination has been detected in the water of ponds or creeks which exceeds chemical-specific ARARs. The remedial action objectives proposed for ground water and leachate are therefore expected to be protective of onsite surface water as well. Another potential source of contamination to surface water would be surface water runoff from the site, and erosion of site soils. The remedial action objective for surface water is as follows:

- Control of surface water runoff and erosion of site soils which may impact surface water.

Surface Water Sediments

The sources of contaminants that have impacted surface water sediments at the site are undefined. Feasible source mechanisms of detected contamination in surface water sediments include: runoff of precipitation from impacted surface drainage areas; discharge of contaminated ground water; and, transportation of contaminants from upstream sources. Containment of the landfill and buried waste lagoon area by capping would eliminate potential sources of surface runoff. Additionally, remedial actions which would minimize the volume of ground water and landfill leachate from the buried waste lagoon area will reduce any contamination of surface water sediments in the creeks.

Estimated risks posed by the pond sediments do not exceed a carcinogenic risk of 10^{-5} nor do hazard indices exceed 1.0. Creek sediments for certain exposure scenarios are slightly higher; however, removal of creek sediments is not considered to be a

reasonable alternative because of the relatively small benefits from removal of the sediments as compared to the removal action's anticipated long-term detrimental effects to the aquatic habitat. Therefore, the remedial action objective for surface water sediments is proposed as the following:

- Natural attenuation of contaminants currently present in the creek and pond sediments by elimination of all sources originating from the Skinner Landfill site.

Landfill Gas/Ambient Air

Landfill gas is known to be emanating from the disposal contents, but the nature and volume of gas has not been quantified. Ambient air contamination has not been determined to be a specific problem on the Skinner site. Future remedial actions, however, may increase the extent to which contaminants would be expected to be discharged to the atmosphere from the landfill waste. The remedial action objective for onsite ambient air is proposed as the following:

- Air discharges from any proposed remedial action will be in compliance with applicable State and Federal regulations.

VI. Summary of Alternatives

All of the alternatives, except for the No Action alternative, described in this section possess the following common elements:

A) Institutional Controls: These controls include fencing at the site boundaries and any areas occupied by the remedy to minimize potential exposure of the general public to contaminants. About 6,600 feet of 6-foot high fencing would be installed. Deed restrictions will limit further excavation, construction or well installation in the area, especially on and near the waste lagoon and landfill areas once capping is completed.

B) Water will be supplied to families living on site by running a township water main to the in-place distribution system on the Skinner property. Water will also be supplied to other residents (about four residences) downgradient of the site whose wells have the potential to become affected.

C) Ground Water Diversion: Two cement-bentonite or soil-bentonite slurry walls will be used to restrict ground water flow. One wall will be placed near the northern site boundary to restrict ground water flow through the buried lagoon area from upgradient sources. The upgradient groundwater would be diverted on the northern side of the slurry wall using an interceptor

trench running along the entire length of the slurry wall. The second slurry wall will be placed between Mill Creek and the interceptor trench on the south side of the site.

D) Surface and Storm Water Diversion, Flood Control: Capping of the site would include the buried waste lagoon, the most recently active fill area, and adjacent (including easement) portions of the site. Capping of adjacent areas would allow for the appropriate slopes necessary to minimize infiltration and erosion. The site topography would be modified via grading and installation of a concrete retaining wall on the southern cap boundary to allow for the appropriate slopes and surface water controls. The retaining wall would be designed to withstand a 100-year flood.

E) Ground Water and Surface Water Runoff Monitoring: A monitoring program would be implemented to verify that migration of contaminants and surface water infiltration are effectively controlled.

Alternative 1: No Action

CERCLA requires that a "No Action" alternative be considered as a basis upon which to compare other alternatives. Under this alternative, no remedial action would take place and the site would remain in its present condition. All contamination would remain in the surface and subsurface soils, sediments, ground water and surface water. This alternative would not comply with State and Federal Applicable or Relevant and Appropriate Requirements (ARARs) and would not adequately protect human health or the environment. There would be no cost involved under this alternative.

Alternative 2: Removal and On-Site Treatment of Buried Waste Lagoon Soils; Capping; Collection and Above-Ground Treatment of Ground Water

Under this alternative, the most contaminated soils of the buried waste lagoon would be excavated and incinerated onsite via rotary kiln incinerator. Other impacted site soils would be excavated and consolidated beneath a common site-wide multi-media cap. The multi-media cap, which would consist of clay, a synthetic membrane, a biotic barrier and appropriate cover material, would be installed over the waste lagoon area and the most recently active landfill area. The site topography would be modified by regrading and installing a retaining wall to allow for the cap installation and conform to accepted landfill closure practices. Creek sediment contaminants would be allowed to naturally attenuate in situ.

Excavation of the buried waste lagoon would begin with the removal of debris overlying the area. The debris would be sorted

to remove large metallic and foreign matter. The remainder would be shredded and stockpiled on site. A Ground Penetrating Radar survey of the area would be performed to locate any drums which may be present in the area. Any drums located would be removed during the excavation of impacted soils.

The ash resulting from the soil incineration would be solidified, if necessary, to prevent leaching of metals. Stabilization of the ash would be accomplished by adding cement kiln dust, lime, or other appropriate material to the ash. The solidified ash would then be disposed of onsite beneath the cap. Regrading and capping would be performed to minimize the infiltration of surface water into the excavation area.

Ground water collection and treatment would also be performed by installation of an interceptor trench north and parallel to the East Fork of Mill Creek. The system would discharge ground water to an onsite treatment system consisting of two activated carbon adsorption vessels for removal of organic contaminants. Treated water from this system would discharge to the East Fork of Mill Creek under a National Pollution Discharge Elimination System permit or to the Butler County Publicly Owned Treatment Works. A slurry wall would be installed near the northern site boundary to minimize ground water recharge from upgradient and to de-water the contaminated soils in the capped landfill. Ground water flowing into the site from the upgradient north would be diverted on the northern side of the slurry wall via an interceptor trench (containing appropriate granular backfill) running along the entire length of the slurry wall.

In addition, the other common remedial elements previously described would also be implemented. These include: institutional controls; alternate water supply; ground water diversion; surface and storm water diversion and flood control; and, ground water and surface water run-off monitoring. The Present Value Cost of Alternative 2 would be $28,700,000.

Alternative 3: Consolidation and Capping of Soils; Collection and Above-Ground Treatment of Ground Water

Under this alternative, impacted soils throughout the site would be consolidated beneath a common multi-media cap as described under Alternative 2. Creek sediments would be left to naturally attenuate in-situ.

A ground water collection and treatment system would also be installed to capture impacted ground water and leachate. This system would be identical to that presented under Alternative 2. A slurry wall would be installed near the northern site boundary to minimize ground water recharge from upgradient, and to de-water the contaminated soils in the capped landfill.

The other common remedial elements described previously will also be implemented. These include: ground water diversion; institutional controls; alternate water supply; surface water and storm water diversion and flood control; and, monitoring of ground water and surface water runoff. The Present Value Cost of Alternative 3 would be approximately $15,500,000.

Alternative 4: Consolidation and (Solid Waste) Capping of Soils; Collection and Above-Ground Treatment of Ground Water

Alternative 4 would consist of all the elements presented under Alternative 3, including consolidation and capping of impacted soils, collection and on-site treatment of ground water and institutional actions. Alternative 4 would however, differ from Alternative 3 regarding the type of barrier layer to be used. Under Alternative 4, the barrier layer would consist of a single-media clay cap, complying with Ohio Administrative Code 3745-27-11 (Construction Specifications for Closure of Sanitary Landfills). The Present Value Cost of Alternative 4 would be $14,800,000.

Alternative 5: Removal and On-Site Treatment of Buried Waste Lagoon Soils; Site Capping; Soil Vapor Extraction; Collection and Above-Ground Treatment of Ground Water

Alternative 5 contains all elements of Alternative 2, and also calls for treatment of capped soils via soil vapor extraction. Soil vapor extraction would be expected to remove residual volatile organic contamination from soils beneath the site cap. Because volatile organics are the most mobile constituents, the benefits of removing volatile organics may be significant. The Present Value Cost of Alternative 5 would be $29,000,000.

VII. Evaluation of Alternatives

The NCP requires that the alternatives be evaluated on the basis of the nine evaluation criteria listed below. This section discusses how the preferred alternative compares to the other alternatives considered. Remedies selected for Superfund sites must meet all nine criteria.

The U.S. EPA's Nine Evaluation Criteria For Addressing Hazardous Waste Sites are:

1. Overall protection

2. Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)

3. Long-term effectiveness and permanence

4. Reduction of toxicity, mobility, and volume through treatment

5. Short-term effectiveness

6. Implementability

7. Cost

8. State acceptance

9. Community acceptance

VIII. Comparative Analysis of Alternatives

1. Overall Protection

All alternatives under consideration (except the No Action alternative) are expected to be protective of human health and the environment in the long term.

Alternatives 3 and 4 are similar in terms of protection of human health and the environment. Each alternative would employ collection and treatment of ground water to prevent further contaminant migration from the site. Each alternative would also employ site regrading and capping to prevent further infiltration of surface water into soils and subsequent leaching of contaminants from soils to ground water. However, Alternative 4 would use a solid waste (single-media) cap and Alternative 3 would use a hazardous waste (multi-media) cap. This difference is not expected to significantly affect their protectiveness of human health and the environment. Contaminant mobility, however, would be reduced significantly by capping the site with a multi-media rather than a single-media cap; this is because infiltration of surface water would be less with a multi-media cap, thereby minimizing leachate generation. Infiltration is reduced by 90% through a single-media cap. The proposed ground water collection and treatment system is expected to capture infiltrated surface water from either cap. Therefore, Alternatives 3 and 4 are roughly equivalent in their abilities to protect human health and the environment.

Those alternatives which provide treatment of contaminants before on-site landfilling (Alternatives 2 and 5) provide the best overall protection because the contaminants will be treated to reduce their toxicity, mobility and volume. Alternative 5, which is similar to Alternative 2, is the most protective alternative in that it involves an additional contaminant removal step of in-situ soil vapor extraction. Alternatives 2 and 5 may pose some additional short-term risks over the other alternatives in that: some organic chemicals will become mobile via volatilization during the excavation step; increased dust and truck traffic in

the area; and, the potential to encounter military ordnance allegedly buried somewhere onsite.

2. Compliance With ARARs

Federal and State ARARs for this site are outlined in Section 2.0 of the Feasibility Study document. ARARs are addressed in three categories: chemical-specific, action-specific, and location-specific.

Chemical Specific: All the alternatives are expected to exceed chemical-specific ARARs for surface water and groundwater.

All the alternatives, except the No Action Alternative call for a ground water collection and treatment system to ensure that no further surface water degradation occurs. All surface water quality ARARs would be complied with for all remedial alternatives except Alternative 1.

The site ground water would exceed chemical-specific ARARs under all five alternatives. However, all alternatives except the No Action alternative would use a ground water collection and treatment system to prevent contaminant migration. Treated ground water would be in compliance with ARARs prior to discharge, but in-situ ground water concentrations would be reduced appreciably only by removal and treatment of impacted soils under Alternatives 2 and 5. Onsite ground water would remain at levels exceeding ARARs due to residual soil contamination, even under Alternatives 2 and 5. This soil contamination would be expected to cause leaching into ground water, resulting in a continuing need for onsite treatment. However, the additional step of soil vapor extraction under Alternative 5 would reduce the amount of residual soil contamination in the waste lagoon area that would be available to contribute to the groundwater contamination.

In-situ ground water contaminants would not be significantly reduced for either of the onsite disposal and capping scenarios of Alternatives 3 and 4. Although offsite migration of contaminants is prevented via the ground water collection and treatment system, elevated levels of contaminants in ground water above ARARs would remain indefinitely, resulting in a continuing need for this system.

Action-Specific ARARs: These ARARs will be complied with by all but Alternative 4, which uses a solid waste cap for the site. If materials on the site are determined to be hazardous waste (either listed or characteristic), capping the site would not comply with OAC 3745-27. All other aspects of this alternative, and all other alternatives would be in compliance.

Location-Specific ARARs: All aspects of all alternatives would be in compliance with location-specific ARARs.

3. Long-Term Effectiveness and Permanence

Alternatives which employ treatment as a primary remedial action for soils (Alternatives 2 and 5) are considered to be more effective in the long-term and more permanent. Alternatives which employ containment as a primary remedial action for soils (Alternatives 3 and 4) will result in the need for more long-term controls. Although some residual contamination is expected to be present after implementation of Alternative 2 or 5, the amount of residual environmentally mobile contamination onsite would be considerably less than that expected from consolidation and capping of the impacted soils and landfill contents. Thus the magnitude of residual risk posed by onsite contaminants would be greater under the alternatives prescribing containment than for those prescribing treatment.

4. Reduction of Contaminant Mobility, Toxicity and Volume Through Treatment

All the alternatives (except No Action) use activated carbon adsorption for ground water treatment; therefore, the alternatives are equal in terms of these criteria for ground water treatment.

Soil treatment is considered in two of the alternatives -- rotary kiln incineration in Alternatives 2 and 5 and soil vapor extraction in alternative 5. Rotary-kiln incineration would significantly reduce contaminant mobility, toxicity and volume. If air emission controls are used also, treatment via soil vapor extraction would also reduce contaminant mobility, toxicity and volume. Thus, the alternatives that treat soil are considered to more effectively reduce contaminant mobility, toxicity and volume. Further, subsequent treatment of residual soil contamination with soil vapor extraction will further reduce contaminant mobility, toxicity and volume.

Contaminant mobility would be reduced significantly by capping the site with a multi-media rather than single-media cap. With a multi-media cap, infiltration of surface water would be minimized, thereby minimizing leachate generation.

5. Short-Term Effectiveness

Alternatives 2 and 5 are considered to be less protective of human health and the environment over the short-term period than Alternatives 3 and 4. This risk would result from possible uncontrolled releases of vapor phase organic compounds during excavation of the buried waste lagoon. An air model was developed in the Feasibility Study to evaluate the potential

impacts of an open excavation. Results indicate that even under the worse case scenarios, the risks would be minimal. Onsite engineering controls and site security would further minimize any risks. All other alternatives are expected to be equally effective in the short-term.

6. Implementability

All of the alternatives under consideration are equally implementable. Implementation of Alternatives 2 and 5 would require lead time for the manufacture, installation and conduct of trial burns and sampling prior to the operation of the incinerator. The other alternatives and the remaining aspects of Alternatives 2 and 5 would need considerably less time to implement.

7. Cost

The alternatives can be ranked by cost as follows: Alternative 1 (No Action) has no associated cost. Alternative 4 is least expensive, followed in increasing order of magnitude, by Alternatives 3, 2 and 5. Based on a 30-year operating life, the estimated net Present Value Costs for technology and implementation range from $14,800,000 for consolidation, containment and single-layer capping, to $29,000,000 for partial soil excavation, incineration, multi-media capping and soil vapor extraction.

8. State Acceptance

The State of Ohio supports the preferred alternative for the remedial clean up.

9. Community Acceptance

Community acceptance of the preferred alternative will be evaluated after the public comment period ends and will be described in the Record-Of-Decision for the Skinner Landfill site.

IX. The Preferred Alternative

The U.S. EPA and OEPA prefer Alternative 5 for the remediation of this site. This alternative involves the removal and treatment of buried waste lagoon soils, collection and treatment of ground water leachate, consolidation and capping of other impacted soils with treated soils, and institutional controls. Impacted soils from the buried waste lagoon, and other hot spots encountered during subsequent investigations, would be excavated and treated onsite via rotary-kiln incineration. Debris overlying the buried waste lagoon and impacted soils from elsewhere onsite would not

be treated onsite. These materials would be excavated, consolidated, and capped with a multi-media cap. Treated soil from this process would be stabilized to reduce leaching of the metals, and capped with a hazardous waste cap. Soil vapor extraction would be performed after capping to remove residual volatile organic contaminants from unsaturated zone soils.

The soil vapor extraction system is estimated to consist of six extraction wells, a vacuum pump, and an air emissions control system. A vacuum pump would induce air flow through the impacted soils. As the air passes over the impacted soils, volatile organic contaminants are volatilized into the air and are drawn out of the soils through the extraction wells. Extracted air is then pumped through an air emissions control system to reduce levels of contaminants prior to discharge. A regenerable dual-bed activated carbon adsorption system would be used to control air emissions. As previously described, ground water collection, treatment, and discharge to Mill Creek, as well as other institutional controls would be implemented.

The initial capital costs of Alternative 5, which includes materials and installation fees of all remedial components would be approximately $22,900,000. The annual operating costs are estimated to be $400,000. The total project cost is approximately $29,000,000.

In summary, Alternative 5 will substantially reduce current and future risks to human health and the environment at the site by excavating and treating the principal threats and other less contaminated materials remaining at the site. Any risks associated with this alternative would be short-term in nature and ultimately balanced by the long-term protectiveness of this alternative. The U.S. EPA guidance entitled: "Conducting Remedial Investigations/ Feasibility Studies for CERCLA Municipal Landfill Sites" (February 1991), defines a hot spot as large enough that its remediation would significantly reduce the risk posed by the overall site, but small enough that it is reasonable to consider removal and treatment. The U.S. EPA believes that a hot spot defined as those waste lagoon sediments that exceed 10^{-4} excess lifetime cancer risk and any drums nests encountered through the course of excavating the waste lagoon sediments, meet the above requirements because of the following reasons:

1. Since the majority of the hazardous waste is believed to be disposed in the waste lagoon, removal of the waste lagoon sediments using the above criteria would significantly reduce the risk posed by the overall site, by eliminating a significant source of hazardous substances.

2. The remaining waste would pose a risk equivalent to or less than the risks posed by the landfill contents.

3. The volume associated with the 10^{-4} criteria estimated at 17,000 cubic yards, is small enough that it is reasonable to consider removal and treatment.

Furthermore, the preferred alternative is believed to provide the best balance with respect to the nine evaluation criteria. Based on available information, the U.S. EPA and Ohio EPA believe the preferred alternative will be the most protective of human health and the environment, comply with ARARs, would be cost-effective, and would use permanent solutions and alternative treatment technologies to the maximum extent practical. Because this remedy uses incineration and vapor extraction to destroy organic contaminants, and stabilization to immobilize inorganic contaminants, it would also meet the statutory preference for a remedy that involves treatment as a principal element.

In addition to the preceding description, future investigations at the site are inherent in the scope of this remedy. Two areas of the site, for which limited information exists, are the northwest corner of the site above the Duck Pond and the buried valley source on the Skinner property. This area and other portions of the site where conditions may change will be further investigated. Any new and significant information discovered during these investigations will be made available to the public and factored into the remedial planning process.

X. Community Participation

For a complete description of the investigation and the alternatives under consideration for the site, interested persons can review the documents available at the following information repositories:

Union Township Library
7900 Cox Road
West Chester, Ohio 65069
(513) 777-3131
Hours: Monday-Friday, 10:00 am - 8:30 pm
Saturday, 10:00 am - 5:00 pm

The Administrative Record, which contains all of the documents that EPA will use to select the final cleanup remedy for the site, is located at the following address:

U.S. EPA, Region 5
Docket Room
77 West Jackson Boulevard
Chicago, Illinois 60604-3590
Hours: Monday-Friday, 9:00 am - 5:00 pm

Written comments will be accepted during a public comment period held between April 27 and May 27, 1992. Members of the community are encouraged to attend a public meeting on May 20, 1992 at 7:00 p.m., at the Union Township Hall to discuss the proposed alternatives for remediating contamination at the site. Verbal comments will be recorded during the meeting. Comments received during the public meeting will be addressed in a Responsiveness Summary, which will be included in the Record of Decision (ROD) and will be made public in the information repository after the ROD is signed.

If you have comments or questions about the Skinner Landfill site, please address them to:

Cheryl L. Allen
Community Relations Coordinator
U.S. EPA, (P-19J)
Office of Public Affairs
77 West Jackson Street
Chicago, Illinois 60604-3590
(312) 353-6196

Sheila A. Sullivan
Remedial Project Manager
U.S. EPA, (HSRM-6J)
Office of Superfund
77 West Jackson Street
Chicago, Illinois 60604-3590
(312) 886-5251

Toll Free Number: 1-800-621-8431
(9:00 a.m. - 4:30 p.m. CST)

GLOSSARY

Applicable or Relevant and Appropriate requirements (ARARs) - Federal, State and local environmental and public health laws with which remedial actions must comply.

Baseline Risk Assessment - A study conducted to determine the associated short and long-term current and future risks posed to public health and the environment if no remedial actions are undertaken.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - A Federal law passed in 1980 and revised in 1986 by the Superfund Amendments and Reauthorization Act. CERCLA created a special tax that goes into a trust fund, commonly known as "Superfund", to investigate and clean up abandoned or uncontrolled hazardous waste sites.

Dioxins - Toxic chemical compounds which are usually generated as a by-product of chemical production processes, combustion processes, auto exhaust, and wood treating operations.

Furans - See Dioxins above

Ground Water - The water beneath the earth's surface that flows through soil pores and rock openings.

Inorganic Compounds - Chemical compounds that are composed of mineral materials, including salts and minerals such as iron, aluminum, mercury, and zinc.

Leachate - A liquid (usually water from rain or snow) that has percolated through wastes and contains components of those wastes.

National Priority List (NPL) - U.S. EPA's list of top priority hazardous waste sites that are eligible for federal money under Superfund.

National Contingency Plan (NCP) - The Federal regulation that sets the framework for the Superfund program. The NCP identifies the governmental organizations involved in the remedial response, outlines their roles and responsibilities, and discusses the interrelationships of these organizations. In addition, the NCP provides guidelines for planning and conducting response activities.

Organic Compounds - Chemical compounds composed primarily of carbon, including materials such as solvents, oils, and pesticides.

Permeability - The ease with which ground water moves through earth materials. Movement is controlled by the size and shape of spaces between these materials.

Polychlorinated Biphenyls (PCBs) - A group of organic compounds related by their basic chemical structure. They are highly resistant to degradation, but have a tendency to be retained in body tissue. They where widely used in electrical capacitors, transformers, and other products in the U.S. before 1980.

Present Value Cost - An economic term used to describe today's cost for a Superfund cleanup and reflect the discounted value of future costs. A present value cost estimate includes construction and future operation and maintenance costs. U.S. EPA uses present value costs when calculating the cost of alternatives for long-term projects.

Record of Decision (ROD) - a document signed by EPA's Regional Administrator, outlining the selected remedy for a Superfund site. The ROD includes the Responsiveness Summary, which addresses concerns presented to EPA during the public comment period.

Sediment - Material that settles to the bottom of a stream, creek, lake, or other body of water.

Surface Water - Streams, lakes, ponds, rivers or any other body of water above the ground.

Semi-volatile Organic Compounds - Organic chemicals that vaporize less readily than VOCs. These compounds include many polynuclear aromatic hydrocarbons and pesticides.

Slurry Wall - A civil engineering technique commonly used at hazardous waste landfills to prevent movement of water soluble and mobile contaminants by restricting ground water movement around or beneath the contaminant source. The most common slurry wall construction method is to excavate a trench and backfill with low permeability mixtures of soil or cement and bentonite clay.

Volatile Organic Compounds (VOCs) - Organic chemicals, such as methylene chloride and benzene, that vaporize easily. Some VOCs found at the site include carbon tetrachloride, vinyl chloride, benzene, and chloroform.

JOHN A. BOEHNER
OHIO

COMMITTEES
AGRICULTURE

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SMALL BUSINESS

Congress of the United States

House of Representatives

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May 28, 1992

Ms. Mary Canavan
Congressional Liaison
U.S. Environmental Protection Agency
Ralph Metcalfe Federal Building
77 W. Jackson Blvd.
Chicago, Illinois 60604-3590

Dear Mary:

I am writing to express my concern regarding the recent public forum regarding the Skinner landfill. I preface my remarks by admitting that I was not in attendance and thus am relying upon the comments and concerns directed to me by my constituents, members of my staff and newspaper accounts of the meeting.

Fairly or unfairly, I must state that it appears my earlier concerns as outlined in my letter of last week and the suggestions and comments of my staff in their phone conversation with your office were either ignored or not understood. I hope that it is simply a case of our not communicating clearly with you.

"I pay my taxes, a lot of them. I guess then when I attend a meeting with a Federal agency in charge, I would at least expect that someone would show up from that agency who did not sound stupid and shrug their shoulders." This very harsh statement was directed to my staff after the meeting by a constituent in attendance. It is of a similar nature to calls my office received the day after the meeting.

My impression is that there were numerous questions, many of a technical nature, that went unanswered, including questions regarding the sighting of an incinerator close to a school, emission models and off site incineration. In our previous communications, I suggested that EPA be prepared to fully address these specific questions as well as those of a more technical nature. I sincerely hope that in the future EPA is better able to answer these type of questions when conducting public meetings.

It is not my intent or desire to enter into an adversarial relationship with EPA regarding the Skinner landfill. Indeed, I would hope that together we could prove to the residents of Union Township that in at least this case, the Federal government can be responsive to a community's needs. However, I feel that perhaps you underestimated the seriousness of my suggestions and concerns as outlined earlier.

I once again wish to reiterate my desire to work with EPA in assuring that the cleanup of the Skinner landfill be done in the most cost effective, expeditious and safest manner possible. We owe no less to the current and future residents of Union Township.

Sincerely,

John A. Boehner

PUBLIC HEARING

* * *

IN RE:

SKINNER LANDFILL SUPERFUND SITE

* * *

TRANSCRIPT OF PROCEEDINGS

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BE IT REMEMBERED, that the above-entitled meeting commenced at the Union Township Administrative Building, 9113 Cincinnati-Dayton Road, West Chester, Ohio, on Wednesday, May 20, 1992, at 7:10 p.m.

* * *

I N D E X

SKINNER LANDFILL SUPERFUND SITE

- - -

SKINNER LANDFILL SUPERFUND SITE

PUBLIC MEETING

MS. CHERYL ALLEN: Good evening, everybody, and thanks for coming. My name is Cheryl Allen, and I'm the Community Relations Coordinator with U.S. EPA and your moderator for tonight's meeting.

I hope when you came in this evening that you signed your name to the sign-in sheet as that adds your name to any future fact sheets or updates on Skinner Landfill. If you'd like to get further information about Skinner I encourage you to visit the information repository located at the Union Township Library, 7900 Cox Road in West Chester. Now, the repository contains laws, relation plans and other documents about the investigation at the Skinner Superfund Site.

Now, the purpose of tonight's meeting is to discuss with you the Feasibility Study and proposed plan for the Skinner Landfill and most importantly to take your oral comments on the proposed alternatives to clean up the site. The public comment period on the Feasibility Study and the proposed plan is the next step in selecting a final remedial action for the cleanup of the Skinner Landfill site. The comment period provides the opportunity for local residents to express their thoughts and give comments to U.S. EPA on all of

concentrations get lower. In this area the concentrations are very few VOC's and in the five to ten parts per billion range. Ground water discharge in the East Fork Mill Creek -- and we sampled the creek in the water column -- we came up with -- it was nondetect; and sediments, there were some compounds above background, but we don't really -- they're not really ground-water related; they're more from surface runoff.

But this is a current snapshot of the site and what will happen in the future. I guess the main conclusion that can be drawn from our investigation is there is a definite pathway from the waste lagoon to East Fork Mill Creek. And given the nature of the highly contaminated waste lagoon sediments -- and there are also buried drums near the waste lagoon area -- ground water and surface water in East Fork will degrade to where concentrations are much greater than they are today.

And what does this all mean? What's the risk posed under no action? Well, this is where I hand it over to Sheila, and Sheila will talk about the current risks.

MS. SHEILA SULLIVAN: At the time of our last public meeting we were in the midst of the risk assessment. And so now I'd like to give you a brief overview of the process and the results that we came up with.

UNIDENTIFIED SPEAKER: Can you speak louder, please? Somehow it isn't coming through the

microphone.

MS. SHEILA SULLIVAN: The first overhead here, Objectives of the Baseline Risk Assessment. We want to get an idea of the current risks to the public and the environment from the site and what the future risk would be at the site if it were not cleaned up. That's why we call it a Baseline Risk Assessment. Secondly, we want to find out how much of the contaminants can be left on site without posing an unacceptable risk to human health and the environment. Thirdly, the Risk Assessment gives us a basis for comparing the potential health impacts from all five remedial alternatives that we'll be talking about later. And lastly, it gives us a consistent record for documenting the health risks at the site.

The first step that we went through was to identify our chemicals of concern at the site. We looked at the data from both of the remedial investigations that were conducted, and a total of about 166 chemicals were found at the site. Of these, about 114 chemicals were retained and carried through the risk assessment. These chemicals that were retained represented all the classes of chemicals that were found, which included inorganics that includes metal, volatile organics, semi-volatile organics, pesticides, dioxins and furans.

The next step is the exposure assessment. And this is a critical step because we're looking at all the

the remedial alternatives concerning the site. Based on the public comments we receive tonight through oral comments and through the mail, EPA may modify the proposed plan or choose another alternative developed from the Feasibility Study.

Following the public comment, EPA prepares what is called a Responsiveness Summary which will address all the public comments that we receive here tonight and through the mail. EPA will then cite a ROD, or Record of Decision, which is a document that outlines the cleanup action which will be implemented at the site. After the Record of Decision a design is completed and the cleanup will begin at the site. Now, the oral comment period for Skinner was scheduled to conclude on May 27th, 1992, but based on a request for an extension the comment period will now conclude on July 13th; so you can continue to send written comments to me at the address listed inside the fact sheet or you can give your oral comments here this evening.

A component of EPA's preferred alternative is incineration. In late June, U.S. EPA will conduct an incineration workshop which will focus in more detail on your questions and concerns about incineration. We have also provided you with a question-and-answer fact sheet on incineration; and if you didn't get that, they're on their way. We will be notifying you in the future as to the time, date and location of the workshop within the next few weeks.

Right now I'd like to briefly go over the agenda for tonight's meeting and introduce to you our presenters. Fred Bartman is the Remedial Project Manager for U.S. EPA, and he will give the site background and explain the remedial investigation. Sheila Sullivan is also Remedial Project Manager for U.S. EPA, and she will explain the Risk Assessment results and explain the evaluation of the alternatives. Then Fred will come back and explain the proposed alternative, and Sheila will address some of the community concerns we have received thus far through the mail and through telephone conversations.

I'd like to also recognize Mark Sheahan who is Remedial Technologies Coordinator for Ohio EPA. And in the audience this evening we have Kathy Lee Fox. Where are you, Kathy? She's the new Site Coordinator for Ohio EPA for Skinner Landfill; and she is located out at the Southwest District Office in Dayton. Mike Scarky is a Group Leader for Ohio EPA. Jane Taft, she is the Public Involvement Coordinator for Ohio EPA. Bill Troxler is from Focus Environmental, Incorporated. It's an incineration consulting firm. And Gina -- she's probably out front. She was the young lady that was signing everyone in -- she was the former Community Relations Coordinator for Skinner.

Now, after all the presentations are made you will have an opportunity to ask questions; and then after

the question-and-answer period we will begin the public comment portion of the meeting. During that time anyone who wishes to make any statements about the proposed remedy of Skinner may do so. And we ask you to state your name for public record because we have a court reporter here who is recording the whole proceeding; and we will be officially doing that because we need all your comments to respond in the Responsiveness Summary, as I explained earlier.

So, right now I'd like to introduce Fred Bartman. And Fred?

MR. FRED BARTMAN: Welcome everyone. Welcome to another one of our meetings. We had a meeting a little less than a year ago regarding the RI background. We have a lot of material to cover, so I'm just going to touch on the highlights of our investigation.

Waste has been sent to this site since at least 1955.

UNIDENTIFIED SPEAKER: Excuse me. Can you turn the speaker up a bit? People can't hear.

MR. FRED BARTMAN: It's mostly trash and demo material that's been sent to the site, but there is hazardous waste. EPA estimates there is over one million gallons of hazardous waste that's been sent to this site. All waste disposal is confined to a 15-acre area of the site. The majority of the hazardous waste, we believe, is disposed in a

waste lagoon. This is the same waste lagoon that was discovered by the Fire Department and investigated by Ohio EPA in 1976. Since then there's been demo material placed on top of this waste lagoon from 1985 to 1990.

We also looked at other areas of the site where there may have been potential dumping. There's three ponds on site and the two creeks that border the site; and there was a darkened, stained area referred to in the reports as a buried pit. But our investigation focused mainly on the landfill and the waste lagoon area.

(Viewing overhead projector.)

This is a cross-section of the site near the waste lagoon area. This top layer is the demo material that's currently on top of the waste lagoon. Below that are the soils that made up the former waste lagoon sediment. This includes the pink and purple areas. The blueish areas represent a clay silt layer; and there's been very little vertical migration in those areas. The green area represents sand and gravel. It's a more permeable zone and that's where we've had our greatest migration.

And contamination has migrated down into ground water. In one well, GW-20, which is located nearest the landfill, we detected primarily VOCs ranging in concentrations from 10 to 00 parts per billion. Ground water flow is towards East Fork Mill Creek. As we approach East Fork Mill Creek the

current and future ways that humans and other organisms can come in contact with site contaminants. This is also the most difficult step because it involves many considerations and a lot of uncertainty. There tends to be a lot of information that we don't always know; and in these cases the agency uses standard exposure assumptions that produce maximum exposure, that is, the maximum exposure that is reasonably expected to occur.

In the exposure assessment process there are some general steps that we have to follow. Characterize the physical setting of the site. We're looking at the climate, meteorology, vegetation.

Secondly, identifying the potentially-exposed populations. This could be the residents on site, the 800 people at the elementary school, children at the day-care center at the southwest edge of the site, people in the surrounding community. We look at all these populations. And we also have certain sub-populations that we want to consider; and those are people that have the greatest potential to come in contact with the site contaminants. These would be people who work on the site or people that trespass onto the site and can come in direct contact with the contaminants.

The next step is we identify the exposure pathways. This is the path a contaminant can take from the

site to the exposed organism. The overall site risk then is a composite of all these different exposure pathways.

I want to go into this just a little bit. There are four components to an exposure pathway. You need a contaminant source and a release mechanism. This would be the source itself, the site itself. And the release mechanism could be volatilization, it could be leaching, something like that.

We also need a receiving medium where the contaminant goes into. Say we have leaching from the waste lagoon into the creek. The creek would be the receiving medium.

We need an exposure point. This could be if a child is playing in the creek, that would be the exposure point. And we also need an exposure route at that exposure point; and that's going to be inhalation, ingestion, something like that.

So, if any one of these four steps are missing, you do not have a complete exposure pathway and therefore you do not have exposure. So, this is a very important concept that you need to be aware of.

OK. We also need to -- going back to this -- estimate our exposure-point concentrations. And this tells us what is the concentration of the contaminant, where people are coming in contact with the site or the

contamination, what is available for a human to take up. And the last is to estimate the chemical intakes. And this is how much of the contaminant will the organism take into its system.

Now, as I mentioned earlier, when we have unknown information the Agency makes conservative assumptions to insure that the actual intake will be less than what we've estimated. Some of the conservative assumptions we've made during the risk assessment is that ground water will be used for drinking water and that the waste lagoon could be developed in the future for residential use. So, these are conservative assumptions.

The next step in the process is the toxicity assessment. And here we look at the inherent toxic properties of the chemicals of concern, such as whether the chemical causes cancer in animals or humans, or whether it causes other adverse effects that are not cancer; it could be anything from dizziness to organ damage to anything, anything that is not cancer-related but is an adverse health effect.

Usually most of the data available for chemicals is from animals, animal studies. So, the Agency has to take this information and evaluate the likelihood of whether humans would also sustain those same effects. Now, most of this information is available in standard EPA data bases.

The last step is the risk characterization. And here we combine the information from the toxicity

assessment and the exposure pathways to come up with the total risk values for cancer and noncancer risks. Cancer risks are expressed in terms of the increased probability that cancer will occur due to a site-related exposure for over a lifetime, which we estimate as seventy years. So, this is the risk over and above what the background cancer risk rate is, which has been one in four nationally.

This shows the numerical expression that we used to express cancer risk. And this is basically one in ten million. Many times you just see it written as one in ten to the minus seventh exponent. And that means one in ten million persons will develop cancer from a lifetime exposure to the site. Another example is three times ten to the minus four. That means three people in 10,000 would develop cancer due to a lifetime of site-related exposure.

Now, the EPA has an acceptable risk range. And anything within that range and below that is considered an acceptable risk. And here we have one in ten to the minus four -- or one in 10,000 -- to one in a million as the acceptable risk range.

So, with that, this shows you for the Skinner Landfill the current and future risk ranges we came up with for both adult and child populations. OK. So, the current adult population experiences a cancer risk of somewhere between four and nine in 100. The current child population

experiences a cancer risk of somewhere between three and four in 100 for a lifetime exposure to site contaminants. Under the future scenario you can see that the risks are much greater especially when we assume that the waste lagoon will be developed residentially.

And you can see that we did the risk assessment in two ways. We looked at if it were not developed and we looked at the possibility of it being developed. And you can see the risks vary between those two scenarios. But the risks basically range somewhere in between one in 100 to one in 1000 risk range.

Noncancer risks. Other adverse health effects besides cancer are expressed in terms of what we call a hazard index. This is simply the ratio of the average exposure to the site to what is considered to be an acceptable intake or, we call it, a reference dose. And if the exposure from the site exceeds the acceptable exposure, then this hazard index will exceed one. And that's how we tell whether something produces a risk or not. The Agency considers anything less than or equal to one as an acceptable noncancer risk. The greater this number becomes, the greater the risk of experiencing a noncancer adverse health effect. So, it gives us a way to make -- to look at relative risks.

This shows you the noncancer risks from the site. OK. You can see that the current risk to the adult

population is slightly larger than the child population. That's because we also have the exposure group, the occupational exposure group, which children are not included in. So, that produces an additional exposure for adults. Again, under a future scenario you can see that the noncancer risks are much larger if you assume that the waste lagoon is going to be developed.

We can also look at the risk in terms of how much is presented by each of the contaminant media at the site. The greatest risks are presented by the site soils and, to a lesser extent, the ground water. At this point the waste lagoon doesn't pose a risk because it's covered with 25 feet of demolition material. Now, in the future, though, this will pose a risk. We have a one in 100 risk here for future waste lagoon development. And all of the risks go up a little bit. See, the ground water risk is going to go up because the leaching from the waste lagoon is going to go into the ground water and that's going to bump that risk up. And also the ground water is going to discharge into the Mill Creek, so the Mill Creek risks are going to also go up.

And let me just flash this up here because you haven't really seen a site map yet. This will give you an idea of the current risks in green and the future in blue. The black shows when the risk will not change between current and future. Notice the sediment risks are fairly low.

OK. Now I'd like to go into the remedial alternatives portion of the agenda. OK. After we've estimated the risks for the various media at the site, we can identify which media have to be cleaned up and to what level so that an unacceptable risk is not posed to the human health or the environment. And the Agency follows a certain process so that the most appropriate clean-up plans are developed for sites.

The first step that we do is we establish clean-up objectives for all of the media that have been impacted at the site. Now, we define impacted as media that has contamination that presents a cancer risk above one in 10,000 to one in ten million risk range, and the noncancer risk which has a hazard index over one. And, also, impacted is defined by if State or Federal standards and criteria designed to protect the environment are exceeded. This would be LCL's for drinking water or water-quality standards, something like that.

Now I'm going to run through the different media at the site and explain to you what our rationale is or what our clean-up objectives were for that media. The first areas is the buried waste lagoon. In the buried waste lagoon there were many chemicals exceeding the risk base levels, and it is the most concentrated contaminated area of the site and it poses the greatest threat. The materials in the waste lagoon constitute what we call a principal threat. A principal

threat is a highly toxic, highly mobile compound that can't be reliably contained and would present a significant risk if exposure occurred. The Agency's Municipal Landfill Guidance recommends treatment of hot spots in landfills when the wastes are in discreet, accessible locations and they pose a principal threat to human health and the environment. Hot spots are defined as areas posing risks greater than one in ten thousand.

Now, the buried waste lagoon soils and the drum contents that may be present pose a principal threat. Our objectives for this are to minimize the release of those contaminants to the ground water, prevent direct contact with those contaminants and contain or remove and treat those hot spots.

The other portion of the soils -- contaminated soils we've called site-wide soils. And these include other contaminated areas of the site such as the buried pit; and there were some contaminated soils around some of the ground water monitoring wells. As of now the Agency has no standards for contamination in soils, so action levels are based on risk base criteria that we generated in the Risk Assessment and also on any criteria that are available such as drinking-water standards, water-quality criteria.

The soil contamination levels aren't acceptable if leaching from the soil into the ground water produces ground water levels that exceed their clean-up

criteria. So, what we've done is calculated the maximum in the soil that won't produce ground water contamination levels over one in one million or a hazard index over one. So, we want to clean up and contain those soils to prevent leaching and prevent direct contact with those soils as well.

The recent fill area which is up here, it was the most recently active land filled in this area. This was mainly used to dump solid and demolition wastes and it was mixed with much smaller quantities of industrial waste. So, treatment isn't practical due to the volume and variety of contaminants in the landfill. So, containment was carried forward as an action objective.

As far as ground water goes, the ground water and landfill leaching -- they were lumped together -- exceeded the response levels for ground water, which are either risk-based levels or drinking-water standards or any State criteria. The remedial action objectives for ground water were to contain and capture all the ground water and leaching all the produced cancer risks over one in one million or a hazard index over one. We wanted to minimize the contact between the unimpacted ground water and the contaminated ground water and the contaminated soil. And we also wanted to minimize the migration of the contaminants in the ground water.

Now, the surface water -- most of the

surface water contamination is from leaching discharging to Mill Creek and Skinner Creek. Some of it is also due to erosion and runoff. No contamination was found in the surface water that exceeded specific standards, and so the clean-up objectives for ground water and leaching -- it was felt that the clean-up objectives for ground water and leaching are going to be protective of the surface water since there is a direct connection. So, what we needed to do with surface water is control the surface-water runoff and the soil erosion.

OK. Now for the sediments in the surface water bodies. These are the ponds and the creeks. The sediments in Skinner and Mill Creek had some higher levels of organics that bumped the risk up over one in one million or ten to the minus six. The hazard index, however, was not over one. The sediment contamination was due to runoff or precipitation from surface drainage areas and due to some ground water discharge as well.

This can be remediated by eliminating surface-water runoff and minimizing the amount of leaching and ground water that go into the -- that come from the lagoon. And so capping and containing the landfill was felt to be the best objective. The removal of the creek sediments by dredging or something like that was felt not reasonable because of the small benefits that would be gained versus the long-term, adverse impacts to the aquatic habitat. The pond sediments did

not exceed one in one million risk and the hazard index was not over one, so the remedial action goal was to leach them naturally by leaving them in place.

The landfill gas in the ambient air. For this the remedial action goal was that any discharges from any actions at the landfill would comply with all applicable State and Federal regulations.

OK. So, those are -- that's a rundown of the different media at the site and what we -- how we rationalize what we would do with it.

OK. The next step is to develop general response actions for each of the impacted media that will satisfy the clean-up objectives that we just mentioned. And then the next -- after that we identified all the technologies possible to accomplish the response actions. And we screened them based on effectiveness, implementability and cost. The Agency has already screened some of these technologies that are not effective or appropriate for landfill use. But the way they screen them was when effectiveness and implementability were equal between different technologies, they screened them out according to cost; but when effectiveness and implementability were not equal, the most effective and implementable technology was retained.

And the last step of the process is the technolcgies that are considered appropriate are then grouped

into remedial alternatives that address all the media at the site. And from those, five alternatives were formed; and these were listed on your fact sheet.

The first alternative is the No Action Alternative. And we are required to carry this through analysis because it serves as a basis to compare all the other alternatives. Because of the risks that I've just talked about, the No Action Alternative is not an option here.

The second alternative includes partial excavation and on-site incineration of the waste lagoon soils and consolidation of the other site-wide soils with the incinerated soils beneath a multi-layer landfill cap. And the ground water would be collected and treated on site above ground. And other institutional controls would be applied; and this includes site fencing, connection of some residents to the Municipal water supply, ground water, surface water and air monitoring, and deed restrictions for the site property. And these are just a few of the other common elements between all the alternatives I'm going to talk about.

The third alternative. This includes consolidation of all the impacted soils beneath a multi-layer landfill or hazardous waste cap, collection and above-ground treatment of the ground water, and again, the institutional controls such as site fencing, City water connections, monitoring again in all the media, and deed restrictions.

I forgot to mention Alternative 2 -- the present value cost of Alternative 2 would be 28.7 million dollars. The present value cost of this Alternative 3 would be 15.5 million dollars.

Alternative 4 is exactly like Alternative 3 except that the type of cap used would be a single-layer clay cap or sanitary landfill cap instead of the multi-layer cap. All the other elements would be exactly the same. And the present value cost of that would be 14.8 million dollars.

And Alternative 5 is exactly the same as Alternative 2, the excavation and incineration treatment, ground water treatment, except that it also includes another element which is a soil vapor extraction system. And this would be put in to remove the remaining volatile organic contaminants. And these volatile organics are very toxic. So, this would take them out. And the present value cost of this would be 29 million dollars.

Now, these five alternatives -- a comparative analysis was done on these five alternatives using these eight criteria. The ninth criteria is actually being done during the public comment period. At this point the Agency has put forth Alternative 5 as the preferred alternative, and Fred is going to explain that alternative in more detail.

MR. FRED BARTMAN: Well, in summary, the

alternatives can be narrowed down to two choices, leave the waste lagoon in place and cap at roughly 15 million dollars or remove and incinerate the waste lagoon sediments and cap at 30 million dollars. And we recommend to remove and incinerate the waste lagoon sediments, more specifically Alternative 5. Even though this remedy is two times more than capping, cost is not our only consideration. We consider all these -- well, there's nine criteria that we consider, and here they are. Sorry about that.

EPA puts the highest premium on remedies that utilize treatment. Special source material that represent principal threats. EPA believes that the majority of the hazardous waste is concentrated in the waste lagoon. By removal of this waste lagoon we are destroying the biggest threat posed by the site and to the community. Alternative 5 also provides the greatest degree of protection, long-term effectiveness and permanence. The waste lagoon sediments can be burned safely with proper design, operation and maintenance and monitoring.

As far as the remedy goes, initially we'll start off with clearing the demo material from on top of the waste lagoon. Then we'll inventory and characterize any drums that are buried within this area or any other hot spots that are identified. Based on that, we'll develop a set of plans and specs to burn sediments. We'll set up a trial burn. And

for more information on what a trial burn is there are fact sheets available and we are going to hold a workshop also; it's being offered in late June.

But our remedy is to burn 17,000 cubic yards of the most highly-contaminated material. That's roughly the top 5 to 15 feet of soils below the demo material. The incinerator will be designed to destroy virtually all the organic chemicals. It will meet Federal and State air regulations. It will be operated as a hazardous waste incinerator. It's estimated it will take six months to treat this material after the trial burns have been done.

After we're done the incinerator will be dismantled and removed from the site. All residuals will be tested and treated and placed back within the landfill. There will be constant ambient air monitoring, engineering controls will be practiced, and minimized air emissions during excavation. EPA will have a representative on site virtually on a full-time basis while the incinerator is in operation to insure consistency with the design and monitoring plans. After we're done with the incinerator the demo material will be shredded and placed back within the landfill.

Then the site will be capped. And this is a cross-section of the cap. Initially the waste material will be compacted and soil hauled in to put the site to grade, and a barrier layer will be placed. It will consist of clay and a

plastic liner and it will prevent any rainwater from coming in contact with the waste. It will minimize rainwater infiltration.

Next is a sand layer, and it will prevent rapid drainage of any rainwater that is in contact with the barrier layer. And next is a biotic barrier; and the purpose of that is to stop any critters from damaging the barrier layer. Next is a vegetation layer, and that will promote healthy grass growth and promote runoff, prevent erosion and provide protection from frost damage.

The actual landfill capped area will be 27 acres. Gas vents will also be installed to help control any gases generated by the landfill.

Next is soil vapor extraction. And what it is is an extraction well that's installed below the cap and above the water table, and a vacuum is attached to it; and soil vapors are brought up to the surface and they're treated in this activated carbon unit. This will help address the remaining VOC contamination that's left in the rest of the landfill and also where the waste lagoon was.

Next is ground water trenches. There will be two of them. One will -- this is hard to read -- but one is located -- parallels East Fork Mill Creek, and it will be designed to intercept any ground water prior to discharge to East Fork. Ground water will then be treated and discharged

into East Fork. This will also be part of the system and this will help prevent mixture of East Fork water with contaminated ground water.

Another trench is proposed north of the landfill, and this is designed to intercept any up-gradient surface water and ground water. And this will help further minimize any leaching generation from the landfill.

Another part of our remedy is an alternate water supply. The existing water supply will be extended to a few nearby residents at greatest risk from the site.

So, that's all the components of the proposed remedy. After the remedy has been formally selected we will most likely give qualified PRP's an opportunity to design and construct a remedy. Negotiations could last anywhere from 60 to 150 days. If an agreement cannot be reached, EPA will consider other alternatives, alternatives including doing the design and construction using Superfund moneys. Assuming this is the remedy, design could last up to two to three years, and construction will likely be over a two-year period, which brings us to 1997.

And with that, I'll turn it over to Sheila for the next item.

MS. SHEILA SULLIVAN: OK. We just wanted to take a few minutes before going into questions and answers for discussion of the issues that we know to be community

concerns. And they have been -- these are based on previous comments we've received and questions we've answered.

One of these issues deals with the incidence of illnesses and cancer to children and teachers at the Union Township Elementary School. Now, I just want to explain what we've done here. Through the invectigation and the Baseline Risk Assessment we have characterized the exposure pathways and determined no complete exposure pathways from the site to the school. Now, if you recall the four elements of the exposure pathway, with the air pathway there is little to no volatilization and chemicals from the soil into the air because the waste lagoon, which is most of the volatiles, is covered right now, and the other on-site soils have very low concentrations of volatiles that are in the upper layers.

Now, the surface water has minimal concentrations of chemicals; so, that's not felt to be a source for volatilization. We've also done -- Well, let me get into the drinking water. The drinking water for the school is supplied by the Municipal supply; so, there's no ground-water exposure. And the soil in the schoolyard has been sampled for all major chemicals including dioxins, and these showed no detections.

From the characterization we've done we can't make a connection between exposure to the site while spending eight hours a day at the school and these illnesses.

This doesn't mean that exposure to the site can't occur during other periods of time while not in school. I mean, if a child goes to school, then plays in the creek every day after school, then he's going to be getting exposure.

In the Baseline Risk Assessment we looked at current and future risks due to exposure. Now, cancer would have had to have resulted from past exposures. The ATSDR, or the Agency for Toxic Substances and Disease Registry, is the agency mandated to conduct health assessments which can include looking at past exposures and current exposures at Superfund Sites. Through an agreement, the Ohio Department of Health Bureau of Toxicology and Epidemiology performs that function, and they are preparing a health assessment document at this time. I do not know what it contains, I haven't seen it yet, but it will be ready for review sometime toward the end of the summer.

A second issue that's come up is the air emission risks posed by excavation of the waste lagoon and under the preferred alternative. And to address this issue we did do some air modeling of emissions from the excavation part of the site and some dispersion modeling to see what the ambient concentrations of chemicals would be at the fence line and at other on and off-site receptors, which included the school. And this modeling was done with the assumption of no engineering controls being applied and it was also done

assuming a six-month period over the summer months. From that modeling we came up with risks that ranged from a low of two in ten -- a hundred million, rather, to two in a million, or two times ten to the minus eight to two times ten to the minus six.

So, that gives you now what you know about the risk ranges and what's acceptable to the Agency. That gives you an idea. The risks were fairly low.

And this is the noncancer risk. It ranged from 0.1 to 2.6. And with engineering controls applied, the risks would be well below the low end of the acceptable risk range.

Now, persons performing the excavation would be required to wear personal protective equipment and other controls will be applied. But this is just to give you an idea if you did it under certain conditions with no engineering controls, these would be the risks.

The other issue is the issue of on-site versus off-site incineration. And we realized that the Feasibility Study was deficient in that it did not address off-site treatment of contaminants. I'd like to give you some of the information about why off-site treatment was not feasible. And why it wasn't -- this is some of the rationale that should have been in the Feasibility Study. And one of the big issues is availability of off-site commercial incinerators. And this is considered a relatively large amount of soil to

incinerate off-site. Commercial-permitted incinerator capacity is a real commodity right now because the environmental regulations were promulgated relatively recently compared to the amount of time that hazardous waste has been around.

So, right now these facilities are at a premium. Unfortunately the waste industry hasn't kept up with the regulations, and arrangements have to be made to do off-site treatment. We would be probably waiting a long time. I've been quoted three to five years before the waste could be incinerated off-site. And one of the considerations is not wanting to leave an excavation site open for a long period of time.

Another part of this rationale is the issue of transportation of the waste off-site and those hazards associated with that. The other issue is that there is -- the Agency has much less control over the processing of the waste. If there's any problems with holdups or permitting, we cannot manage the time schedule and we are pretty much at the mercy of when these incinerators are available. So, basically you lose control over the process.

And one of the last issues, too, that figures into this is cost for off-site incineration; and this is very high.

Another item which came up which has come to our attention is the risks posed by the stack emissions from

incinerators and who would be impacted by that. And these risks can and will be modeled. Our general experience shows that these risks will be insignificant compared to the air-emission risks from the excavation part of the process. So, this is what generally happens, and we felt comfortable with the fact that the air excavation risks were fairly low. But again, this issue can be addressed further along with other issues in the incineration workshop later in June.

With that, I want to give it back to Cheryl here.

MS. CHERYL ALLEN: OK. We're going to open it up to question and answers right now. And if you can stand and identify yourself. And let me remind you that now is the time to ask questions, because when we get to the public comment portion of the meeting it's just comments and statements and thoughts; we can't respond to them. So, now is the opportunity to ask questions.

Sir? Give a name and address.

MR. LAWRENCE BERKLEY: My name is Lawrence Berkley, 9972 Thornwood Court, Cincinnati, 45241. You mentioned the option of off-site incineration and the difficulties in getting capacities of off-site incinerators. But isn't it true that many of our incinerators in this state are being used for out-of-state hazardous waste? Are we being asked to accept an on-site incinerator here when other states

are loaning out incinerator capacity?

MR. FRED BARTMAN: Well, I guess my question -- well, my answer is, "Well, how long did they really have to wait in order to get this capacity?" And can you repeat the question, please? I'm sorry.

MR. LAWRENCE BERKLEY: Very straightforward, are we being asked to consider an on-site incinerator -- One of the reasons is that you're saying it's difficult to get capacity off-site incinerators in the State of Ohio. My question is is that capacity being used by out-of-state sources for hazardous waste?

MR. FRED BARTMAN: Yes, it is.

UNIDENTIFIED SPEAKER: Is that fair? So there is no priority for Ohio to have access to hazardous waste incinerators for Ohio hazardous waste; they would have to wait, as Sheila said, approximately five years, maybe?

MR. FRED BARTMAN: Yeah, currently three to five years.

MS. SHEILA SULLIVAN: I don't think there's any priority given to in-state waste because the commercial incinerator is located in the state necessarily. Ideally, sure, because you wouldn't have to transport it very far. I just said I don't believe there is any priority given to in-state waste to a commercial incinerator that happens to be located in the State of Ohio. I mean, ideally that would be

great because then it wouldn't have to be transported to another state because the costs are very high for transportation, the potential for accidents.

MR. LAWRENCE BERKLEY: Could I come back on just that one point? If you put the risks for on-site incineration back-to-back with off-site incineration, how do they work? Forgetting cost, forgetting availability, just how do the risks compare?

MS. SHEILA SULLIVAN: Well, I think the comparison would be insignificant because the major risk here is risks from excavation. Those overshadow incineration risks by far, and whether we had on-site or off-site excavation, it would still occur. And that's where the majority of risks would be. So, I don't think the on-site versus off-site is as big an issue really. And some of the other points that I mentioned earlier overshadow off-site in that you lose the control; you don't have -- you have an open excavation area. The cost issue is another, transportation.

MR. LAWRENCE BERKLEY: Well, you say that on-site incineration is not a risk item, but, in fact, doesn't Ohio law say that you will not site a hazardous waste incinerator within 2000 feet of a school? Was that rule created on the basis of risk to the public?

MR. MARK SHEAHAN: I'll try to respond to that, Mark Sheahan with the Ohio EPA. I'm not familiar with

the exact site criteria for a hazardous waste incinerator with regard to proximity to a school. That may well be the case.

MR. LAWRENCE BERKLEY: I think it's -- you mentioned that the risks of incineration were insignificant compared with the excavation. How can they be insignificant if there was a rule that says you can't have such an incinerator close to a school?

MR. MARK SHEAHAN: Well, I think the rule drafted that you're after is blanket regulations to be protective without looking at a site in extreme detail. And I think that is what is occurring here. We have a site that a great deal of investigation has occurred at and they have performed some significant air emissions modeling to make that determination whether or not there is a significant risk associated with it -- or they will -- with regard to the incinerator. If that modeling should suggest that indeed the risks are unacceptable with regard to the established standards they have to look at, then certainly the remedy would have a second look taken at it.

MS. SHEILA SULLIVAN: Also that's assuming that there is excavation occurring at every place that there is incineration; and they don't always co-occur. So, you can't always assume that there's going to be air excavation risks where you have an incinerator as well.

MR. FRED BARTMAN: Yeah. I'm not familiar

with that rule, either. I don't know if there is any exception to that, if you did do a Risk Assessment, whether it could be less, or if it applies to permanent incinerators as opposed to a temporary incinerator. And another thing I'd like to point out, assume it does have to be 2000 feet away from the school. What you see in the FS is a conceptual -- what it might look like. What is actually built might be a lot different. Right now it's proposed to be built in a heavy-metal storage area, which I believe is within the 2000 feet. It could be feasible to site it somewhere else where it's outside of 2000 feet.

MR. LAWRENCE BERKLEY: There are not too many places on that site.

MS. CHERYL ALLEN: Go ahead.

MS. KATHERINE STOKER: I have two questions. It was a little hard -- My name is Katherine Stoker. I live at 6979 Hidden Ridge in West Chester. I have two questions. One is it was a little hard to understand if you were saying that you were going to do a risk evaluation comparison between each of the proposed alternatives. Did I hear you say that? Because there was none in the Feasibility Study. Did you say you were going to? That was my first question.

And the second question was there was reference made to full-time monitoring of the site to insure children don't go over and play. When you say "full-time

monitoring", are you talking about full-time monitoring when the workmen are there eight hours a day, or are you talking twenty-four hours a day, seven days a week to insure that that occurs, people don't go wandering about and perhaps seriously injure themselves?

MS. SHEILA SULLIVAN: The first part of that question -- could you repeat the first part again about risks?

MS. KATHERINE STOKER: The first part of the question, in the Feasibility Study I am not aware if there was a comparison of the risks which the surrounding community would experience between the different proposed alternatives. There were evaluations of (inaudible) and there were some evaluations where you proposed one, but I did not see a comparison of the risks between the proposed alternatives.

The other was just how much protection of the site are we going to have? You said it was full-time. Could you explain what "full-time" means to you?

MS. SHEILA SULLIVAN: No, there wasn't a risk comparison that was laid out for each of the alternatives.

MS. KATHERINE STOKER: So, they were not compared with respect to risks they might hold to the community?

MS. SHEILA SULLIVAN: But the risks that would be experienced due to each of those proposals would be

below or within any acceptable risk range. What the specific risks are, you mean? What amount of risk is there if you use Alternative 2? What's there if you use 3? What's there if you use 4?

MS. KATHERINE STOKER: Yeah.

MS. SHEILA SULLIVAN: No, there is not a separate risk for each alternative.

MS. KATHERINE STOKER: You don't plan to make one?

MS. SHEILA SULLIVAN: The way the Feasibility Study was written --

MS. KATHERINE STOKER: That's what I'm saying.

MS. SHEILA SULLIVAN: That's not normally done in every Feasibility Study.

MS. KATHERINE STOKER: Then how can we evaluate which is the safest alternative?

MS. SHEILA SULLIVAN: When I went through each of the media and explained how much -- what we decided to do, or what our action objectives were, based on what the levels were in the media, the alternatives were derived from our action objectives; and the action objectives were all the same. So, each of the alternatives that were proposed equally -- they all meet the action objectives, so they all meet the same -- basically the same risk criteria. We're

allowing a certain amount of risk -- The amount of contaminants that are able to be left in place that do not pose an unacceptable risk is going to be -- basically is fulfilled by all of the alternatives. I don't know if that helps.

MS. KATHERINE STOKER: You're saying -- what you're saying is --

MS. SHEILA SULLIVAN: I know what you're saying.

MS. KATHERINE STOKER: -- you don't intend to because no matter what you do they're all going to be below acceptable risks, therefore we do not need to evaluate which is the safest?

MS. SHEILA SULLIVAN: Well --

MS. KATHERINE STOKER: Should we go on to Part 2?

MS. SHEILA SULLIVAN: OK. The second part --

MS. CHERYL ALLEN: About the monitoring.

MS. KATHERINE STOKER: You said "full-time". I understand the Feasibility Study is they would not be working twenty-four hours a day; they would be working a more standard week. When you say "full-time monitoring", are you talking about forty hours a week or are you talking about twenty-four hours a day, seven days a week so the idle, curious person doesn't come wandering by and perhaps injure themselves

with exposure?

MS. SHEILA SULLIVAN: Site security, that type of thing?

MS. KATHERINE STOKER: Yeah.

MS. SHEILA SULLIVAN: Yeah, there is twenty-four-hour security, yes.

MS. KATHERINE STOKER: And that's composed of?

MS. SHEILA SULLIVAN: Whatever we want to make. We could have a security guard. We could put in certain controls, fencing, that type of thing. Then we could also have personnel as well.

MS. CHERYL ALLEN: That would be part of the design process. Once we decide how we're going to fence it out, then we would position people. That decision would be made at that point, how many people we would have there. But it would be twenty-four hours.

MS. KATHERINE STOKER: You would have people there twenty-four hours a day for the five or seven years that it would take?

MS. SHEILA SULLIVAN: Right.

MS. CHERYL ALLEN: The lady in the back.

MS. CINDY RUSCHER: My name is Cindy Ruscher. I live on Topridge. And part of your alternative was deed restriction. But you also said that your

risk levels increase with development of that land. And I'm concerned as to who'll hold deed to that land and ownership and how it will be used in the future and who will police the use and how development will be prevented in the future.

MS. SHEILA SULLIVAN: The deed restriction is to prevent any excavation at the site and to prevent installation of any types of drinking water wells. In the Risk Assessment the assumption of development on the buried waste lagoon area was a very conservative assumption. That probably would never happen. However, as far as what the regulations are, I mean, that would be what the deed restrictions are, that there could be no development or excavation. So, that was kind of -- that was a hypothetical scenario when I brought up the residential development of the waste lagoon.

MS. MARGE GIBSON: My name is Marge Gibson. I live on Chinook Drive. My question is about the incineration process itself. Is this something that is carried on twenty-four hours a day? Once they light these incinerators do people work twenty-four hours a day or do they just light it one day, close it down, light it at 8:00 and close it down at 5:00 each day? I think the answer is "Yes".

MR. BILL TROXLER: Systems that operate this twenty-four hours a day, that's a normal installation. There have been times that systems cannot operate around the clock, so that's something that would be considered during the

remedial design.

MS. MARGE GIBSON: Could you tell me is this true: I've been told that in order to operate these safely they have to reach a certain temperature and that it is not possible to reach that temperature by turning them off and on daily; that once you get to that temperature you have to keep it there and use it continuously. Is that true or not?

MR. BILL TROXLER: That's normally true. You have to keep them hot. It takes several hours to heat these up. If there is a situation where they are not operating, they normally fire them on fuel just to keep the system hot, but they would not necessarily fire waste. But they would keep them hot around the clock.

MR. DAVID GREGORY: David Gregory, 8052 Thistlewood Drive. My question regarding incineration is do the current EPA air-monitoring regulations call for -- should there be an emission that is above what the acceptable level is, does it call for immediate shutdown of the incineration process, or does it only allow for them to put forth a report at some future time that, in fact, they did violate the air-quality regulations?

MR. MARK SHEAHAN: With regard to the State regulations, it would require continuous monitoring of certain parameters of emissions coming out of the stack. If those are exceeded within certain guidances by the equipment that's

monitoring that, then people will be alerted and there will be a control panel that will alert somebody, and corrective action would be taken to correct the problem. If it's something that really can't be corrected by tweaking the system, making adjustments, then there would be an established protocol to -- Well, first of all, there is automatic waste-feed shut-off systems that would cut off the waste feed if it was operating outside an established standard. And if it was something that could not be corrected, then the kiln would be shut down. Generally that's done gradually so that it's not damaged. But waste-feed shutoff is engineered to be automatic for certain exceedances.

MR. DAVID GREGORY: What lengths of time are we talking for exceedances? Can they exceed for eight-hour periods for adjustment or --

MR. MARK SHEAHAN: No.

MR. DAVID GREGORY: Is that nonregulated other than the fact that they're not to exceed?

MR. MARK SHEAHAN: It would depend on what exceedance there is. But for the ones that are really critical they -- it's virtually automatic if it's exceeding outside the established parameters.

MS. CHERYL ALLEN: I think it would be helpful to just briefly explain what a rotary kiln incinerator is and how it works.

MR. BILL TROXLER: Just a brief overview of how the incineration process would work. There's several types of incineration systems that are used. This is a diagram of a rotary kiln which is probably the most common type on the Superfund Sites. The soil feed is prepared ahead of time. It's screened; it's put through various types of systems to dry the soil, blend it so there is a fairly homogeneous feed material that's fed into the kiln.

A kiln consists of a big, metal cylinder with brick inside with a burner on one end of the kiln. The soil is fed in and the flame passes over the material and the cylinder rotates. And they're inclined just a little bit, maybe three degrees. And as the kiln rotates, the material is transferred through. The gases that are generated both from the burner and from the combustion of the organic materials and waste pass into a secondary combustion chamber which is another combustion chamber that operates at a high temperature to destroy the organics. The temperature is monitored. There are also a number of other parameters measured at those locations.

Then it goes to a gas-cleaning system again. There are various types of systems used. Bag houses are very common. Wet scrubbers are used with some contractors, and it depends on the application. Gas then goes to a fan and blower and blows the clean gas up the stack.

To answer your question that you asked, the

Ohio EPA -- generally in the regulatory approval process there are a number of permit limits that are established. If those permit limits are exceeded, there can be automatic waste-feed cutoffs. Those are specified in the permit. And the time delays are specified in the permit. Some of those can be instantaneous; as soon as it exceeds, the waste feed has to cut off and it has to be brought back within limits before waste can be introduced. There may be some that have a slight time delay from a minute to two minutes, typically.

An eight-hour time delay? I can't imagine anything having a time delay of that time length. But there are a few parameters that have time delays in the order of a minute or two. There may be some parameters that require operators to take action, but don't necessarily require waste-feed cutoffs. Those are typically parameters that would not be considered to be dangerous to health or the environment. Does that answer your question?

MR. CARL MORGENSTERN: Carl Morgenstern, 5759 Woodbridge, West Chester. There would be plans or specifications for these contracts; is that right?

MR. BILL TROXLER: Yes, sir.

MR. CARL MORGENSTERN: Would that be let off of the priority contractors or is the Federal Government going to oversee them do it?

MR. BILL TROXLER: The normal procedure on

the Superfund Site cleanups is to go through a remedial design process. During the remedial design there are general specifications that are established that this machine has to meet; and those will be specifications like the maximum amount of carbon monoxide that can be emitted to the atmosphere, the maximum amount of articulates, the maximum amount of gases, minimum operating temperatures, minimum gas resin times. Generally those are put into the design package.

MR. CARL MORGENSTERN: Like the Ohio EPA does all the time?

MR. BILL TROXLER: Yes, both the Federal Government and some State Governments have.

MR. CARL MORGENSTERN: My question is about construction of this incinerator. You'll have plans and specs that cost a lot of money. Is that up for bid?

MR. BILL TROXLER: There are currently about seventeen different contractors that have transportable or mobile incinerators that have been built. I would expect that someone would -- there would be a bid let normally and those contractors would be allowed to bid on the project. And they would go through a technical evaluation and a bid-evaluation process. As long as their equipment met the performance specs, the contract would be awarded on that basis. It's not a situation where a complete detailed design would be prepared by the EPA or a consultant, and then someone built a

system to those specifications. It's usually called a performance specification. The system has to meet these requirements, then the project is let out for bids.

MR. CARL MORGENSTERN: Does the public have any input into whom that contract is awarded?

MR. FRED BARTMAN: No. Only EPA does.

MR. CARL MORGENSTERN: Which EPA?

MR. FRED BARTMAN: U.S. and Ohio also, both.

MR. CARL MORGENSTERN: Will we know in advance who the bidders are and the names? Will there be a bid list publicly announced?

MR. FRED BARTMAN: Bill tells me it's normally released, yes.

UNIDENTIFIED SPEAKER: Prior to the decision?

MR. BILL TROXLER: It's normally available for anyone to bid on. There is a remedial design package put together. It's a notification that goes out to interested contractors. And anyone who's qualified is allowed to bid.

The process for evaluating those bids is generally a technical evaluation and a cost evaluation. The Agency will go through and they will rank the proposals on a technical basis and give a score from the most appropriate technology down. They will also do a cost evaluation. And the

final award --

UNIDENTIFIED SPEAKER: How about prior performance?

MR. BILL TROXLER: Prior performance can be a criterion. The Agency can include what criteria they want in the bid-evaluation process. And prior performance is quite often a very strongly considered factor in the evaluation.

MR. CARL MORGENSTERN: Let me ask one other question. The lady back here asked the question about restrictions on the deed. You have to own the property. Who's going to have title to this land after we put 30 million dollars into it? Is it going back to the Skinners who caused this trouble in the beginning?

MR. FRED BARTMAN: I'm sorry. I can't really answer that question. Could you please put it in as part of a comment and we will respond to it? Is that fair?

MR. CARL MORGENSTERN: Well, I think the lady had a good point. If you want to have restrictions -- You have to own the land. It's a restriction on the land. Chem-Dyne in Hamilton had something like that. And I understand maybe the Township can take it over, something like that.

MS. CHERYL ALLEN: We'll look into that and respond to it in the summary, sir.

MR. MARK COORS: My name is Mark Coors. I

live at 7526 Galway. This is a follow-up to Carl's question. Number one, presumably I think you used the term PRP's won't come through with money to fund this entire cleanup, which means the Superfund moneys will most likely be utilized. Is it feasible that the Skinners would be effectively put into bankruptcy and their property seized as an asset to help pay for these clean-up costs?

MR. FRED BARTMAN: Well, assuming the Fund is used to build this remedy -- Eventually it will all end up in cost recovery. And to what extent who pays for what, I really don't know. That's for the Court to decide. To the extent what Skinners might pay, I really don't know. It's for a judge to decide.

MS. CHERYL ALLEN: Sir?

MR. GARY CAMPBELL: Yes. I'm Gary Campbell, President of the Lakota School Board. You've acknowledged that we sent a letter. A couple of questions I guess that I didn't hear an answer to. And your Risk Assessment, particularly on the incinerator, is low. What about the Risk Assessment if you run into problems on excavation? How will you notify the school when a problem occurs, if a problem occurred; or do we find out about it afterwards? That would be one question, about a notification process. And also the time frames in which the actual excavation would occur?

MR. FRED BARTMAN: OK. Again, that's more of a design question. As part of the plans and specs, there will be a site safety plan where it will cover the material that you just mentioned. And, you know, I couldn't say what it would be.

MR. GARY CAMPBELL: Will we have a chance to input into that plan as far as notification and how we want to handle kids on the playground if that's an issue?

MS. CHERYL ALLEN: I'm sorry? She was whispering.

MR. GARY CAMPBELL: Will we have a chance -- school officials have a chance to input into that program in terms of notification of when you're going to be doing excavation?

MS. CHERYL ALLEN: Certainly. As part of community relations we'll be out to talk to the school officials. In fact, we're planning to meet with the faculty of the school that's directly across from the site ahead of time when we have our incineration workshop. So, any type of activity that will be occurring that's directly going to affect that area, we will be in constant contact with them.

MS. LINDA SCHNEIDER: Linda Schneider, 8819 Cincinnati-Dayton Road. I'm one of the few residents that have well water still. And from what you've said, it's still going to be quite a few years before any of this even begins.

I'm wondering if the water hookups are something that are done earlier in the process or do we have to go through the entire process to help half a dozen individuals with the water situation?

MS. SHEILA SULLIVAN: That could be addressed sooner. I mean, that's something that once we remedy -- It's a part of every remedy, and whatever remedy is selected, that could be prioritized; it doesn't have to happen near the end; we could determine when it can happen. So, that's not a problem.

MS. MELANIE WITTMAN: Melanie Wittman, 8410 Darlene Drive. My main concern is that maybe I'm not quite sure if we're not going to have a say on what the incinerator is going to be like and what kind of scrubbers they're going to have and what kind of system is going to be used, and we're not going to have any comment period after it's built, after it's chosen; we're not going to be able to say, "That design is OK," or, "This is OK." And it just seems awkward to me that we're here having all these questions, and some of our questions aren't being answered and can't be answered because they can only be answered according to if we know what the incinerator is exactly going to be like. And my concern is we're not going to get that comment period.

MS. CHERYL ALLEN: That's the reason we're here. No. See, you have -- the reason why we're here is to

get your comments. Things that we can't respond to, we're going to tell you we can't respond to them. That's what the Responsive Summary is for. We go back and investigate. This is part of the whole process. You are giving us information on things that we need to go back and investigate on. So, to say that you don't feel that you're part of the process, you are. That's why we're here, to get your concerns and your questions, and then to go back and find out things that we can answer to respond to you on those things. And you are part of the process.

MR. FRED BARTMAN: You're right. There is no opportunity for formal public comment during the design. And what we can do is hold meetings and more workshops as we go along, so --

MR. BILL RACER: I have a question. I haven't heard anything from a taxpayer's viewpoint.

MS. CHERYL ALLEN: Sir, could you speak up?

MR. BILL RACER: My name is Bill Racer. I live at 7193 Timbermill Drive in West Chester. I have a question from a taxpayer's viewpoint. We're talking 30 million dollars here practically. We're talking 1997. And there's many cases where -- in those cases these costs ripple up significantly. You can take Fernald and look at that in the millions of dollars and it's up to 20 billion dollars. And I'm not saying it's going to be like that here, but one of the

things that's amazed me about this site -- and by the way, I think it's about time that the regulatory agencies have shown up. It's been a long time in getting attention to this site. I know there's other priorities, and I recognize that, however, one of the things that amazes me is that all the way from Butler County to the State of Ohio, et cetera, there's been slowness in moving on these issues. You're responding now, but the problem that I have is the PRP's, principal responsible parties, either they're going to pay or the taxpayers or the Superfund is going to pay. Based on the past reluctance, slowness, et cetera, how much pressure -- it's too bad you don't have an attorney here tonight from the U.S. EPA to respond to this -- but how much pressure are you going to put on the PRP's to pay for this? I think it's ridiculous. I think it's a foregone conclusion that it's going to go from 30 million on up.

MR. FRED BARTMAN: Well, first of all, even if we do use Superfund, it eventually does end up in court. And those costs will hopefully be recovered. And as far as what pressure is put on PRP's, it's probably in their best interest to conduct the cleanup. They probably can do it cheaper than the Government can, and that's incentive. They can probably do -- they'll do just as good a job as we can, but cheaper.

UNIDENTIFIED SPEAKER: Isn't there a triple

damage if they fail to do it, too?

MR. FRED BARTMAN: Another option is to issue an administrative order which says, "Do this or we'll -- you could be libel for triple the cost." Well, if the Government went ahead and did it, they could be liable for triple the cost. So, if we do issue an order, it's in their -- they're taking a big -- If we do issue an order and they don't comply with it, they're taking a big chance; they could be paying triple the cost when it does go to cost recovery.

UNIDENTIFIED SPEAKER: I have one other question. I know in some states the counties are held as PRP's. Is that being considered here?

MR. FRED BARTMAN: Well, if they were -- No.

MS. LISA WHITTAKER: Yes. My name is Lisa Whittaker. I reside at 6976 Gary Lee Drive. Some people call me an MB. You can call me whatever you like. I've read your Feasibility Study and I think it needs to be the first thing you put in the incinerator. There are too many unanswered questions. First of all, whose response weighs more, whose comments weigh more, the folks who live nearest the site, our elected representatives, or the responsible parties? That's my first question. Whose comments will weigh the most?

MS. CHERYL ALLEN: If you're talking about

comments between residents and local officials, we don't weigh whose --

MS. LISA WHITTAKER: OK. I have been around the neighborhood in Old West Chester, and what I'm hearing from people is you've never answered the question about are there explosives, are there munitions, is there nerve gas? We better consider whether it is feasible to even excavate the site before we decide to build that mousetrap.

We have worked with regulatory agencies. I'm a member of CLEAN. I'm very proud to say that. We worked with Ohio EPA. We got a permit condition on a medic waste incinerator that says you shall not burn radioactive materials of any kind. It doesn't prevent it. It's documented. There's nobody protecting this community. If you want to believe the regulations will protect you, you take the paper they're written on and you stick it over your face. There's nobody to enforce --

MR. FRED BARTMAN: Regarding what you said about the bombs and nerve gas and mustard gas that may or may not be at Skinner Landfill, well, there is good reason to believe that is not in the waste lagoon. For one, when Ohio EPA investigated the waste lagoon back in 1976 they did not encounter any of that material.

MS. LISA WHITTAKER: Were there flame throwers?

MR. FRED BARTMAN: Yes, there was.

MS. LISA WHITTAKER: How many? Who has a flame thrower in their Municipal trash? This to me is a clear indication that there is Department of Defense waste; and you better talk to DOD and you better base your Feasibility Study on whether there is a chance this stuff is in there. You've never addressed it.

MR. FRED BARTMAN: OK. And we have looked more into the history of the waste lagoon. And the waste lagoon was nothing but a pond. And truck drivers would back up, dump their drums and take it back with them or the site operator might dump them in there and recycle the drums. And we don't think it was -- it was also used to rinse out drums and rinse out tankers reportedly from Chem-Dyne. So, we think it's highly unlikely it was used for --

UNIDENTIFIED SPEAKER: We wanted better lives.

MR. FRED BARTMAN: Now, wait. At the time when they did that inspection there was aerial photos that showed there was a whole bunch of drums on the surface near the waste lagoon. Now, when word got out that Ohio EPA was going to investigate that area, all of a sudden there was a lot of digging or a lot of burying. And I really don't think it was -- and that's how I think the flame -- you know, I'm speculating here -- but I think that's how the flame throwers

got there. And the drums, it was used to dump liquid material and wash it out.

MS. LISA WHITTAKER: I would like to say that you folks have been wonderful to work with and I don't have any hard feelings against you. The problem is we had some high-paid consultants who asked the wrong question. Instead of asking, "How do we make it safe and keep the emissions down," they decided they would build a big magic machine. And the problem with the magic machine is you're going to burn the toxics along with the soil. You can burn the soil, but when you try to capture the toxics, the heavy metals out the back end, you're guaranteeing that we're going to be exposed to this stuff that's in the hole. It's in the hole. Now you're going to put it in the air. There is no way that you will build this thing with less than two scrubbing devices, a dry bagger at the very minimum because it will capture a lot of junk without producing the waste water. Then you need to back it up with the wet scrubber to get the stuff the dry bagger missed. You've got to address excavating based on whether or not there's DOD waste. First go back, do your Feasibility Study, do the job you're paid to do; then let us comment. Give us something we can comment on. This is garbage. You've glossed over all of this stuff. You don't hand us the representative decision and a Responsiveness Summary and say, "We addressed your concerns." I've seen that. I've been a part of that. I

don't put my trust in any Government agency any longer. I trusted Ohio EPA, and they put an incinerator down there. They promised it wouldn't burn radioactive material. They promised it would comply with the 1991 air regulations; and the director reneged on his word. It's burning radioactive materials and it doesn't comply with any air regulations. I trusted one time; twice, no way.

MS. PATTI THOMAS: My name is Patti Thomas, 9720 Talltimber Drive. I contacted both Ohio and Federal EPA and gave them information about a member of this community who told me several years ago at a Meet the Candidates night that he personally was in charge of a Military operation that moved munitions from the Sharonville Depot to the Skinner Landfill. I would like to know who talked to that person and what the response was.

MS. CHERYL ALLEN: Can you tell me who you talked to?

MS. PATTI THOMAS: I've told lots of people. Several people up there know the person's name. I want to know who talked to him and what was his response?

MR. FRED BARTMAN: Well, the answer to that question -- I'd be willing to take testimony at a deposition at any time.

MS. PATTI THOMAS: Did you call the person whose name I gave you?

MR. FRED BARTMAN: Yes.

MS. PATTI THOMAS: What was his response?

MR. FRED BARTMAN: He wanted nothing to do with it.

UNIDENTIFIED SPEAKER: He didn't answer your questions?

UNIDENTIFIED SPEAKER: Can he be Subpoenaed?

MR. FRED BARTMAN: He had his own reasons.

MS. PATTI THOMAS: What he told me was he was concerned about giving this information because of what it would do to real estate values in the community because he was concerned about building a VFW hall and he didn't want to get the realtors discouraged and have them refuse to contribute to his VFW hall. That's why we have munitions that nobody knows about.

MS. DOVE LONG: I just want to know where were the two flame throwers found? Were they found in the lagoon? I'm sorry, my name is Dove Long, 6354 Melrose Way.

MR. FRED BARTMAN: To answer your question, I don't know exactly where it was located.

MS. DOVE LONG: I think that's something you should look into. Also I have a question about the six-to-nine-month incineration period that your proposal says. Is this supposed to happen during the summer? Are you saying

the kids are going to be out of school for months, or do it over three consecutive summers? My toddler will be in school by then.

MS. SHEILA SULLIVAN: What I was talking about was when the excavation is done we modeled it during the summer assuming during the summer months.

MS. DOVE LONG: I'm concerned about the incinerator. We're not all too happy with this incinerator. When is the incineration going to be done?

MS. SHEILA SULLIVAN: We can work -- it depends on the schedule; and that depends on capacity availability. If it was off-site -- that's the whole reason. If we have control over the schedule, we can determine when it can be incinerated.

MS. DOVE LONG: If you have it off-site, then it won't impact the school. If we're talking three to five years at least anyway to get it set up, why don't we ship it off-site? That was the time period you were given by off-site contractors.

MS. SHEILA SULLIVAN: Yeah. Those were estimates.

MS. DOVE LONG: That's what we're talking about if we build it on-site; is that right?

MS. SHEILA SULLIVAN: It would -- yeah, it would be a similar timetable, I agree. But part of it also has

to do with the length of time to incinerate the material. We could work with an off-site incinerator and it would be three to five years before we could do it. But then it's also the time that we have to incinerate it. We can't be guaranteed that with an off-site incinerator it would also take only six months to do, as it would on-site.

MS. DOVE LONG: But we're talking about building an incinerator anyway. Why can't you build it 2000 feet away? Why don't you build it down the road away from those children? Everyone's children are in one spot. You should do your best to stay away from those children.

MS. SHEILA SULLIVAN: As far as the siting of the incinerator goes, that has not been determined at all yet. We will have to go back. What was in the Feasibility Study was set up as far as the best place for it based on the topography and everything else. But at the time we were not aware of the 2000-foot restriction.

MS. DOVE LONG: But you're aware that it's right across the street. It doesn't take a rocket scientist to figure out that's close to your kids. That's something I hope you take very seriously.

MS. SHEILA SULLIVAN: It will be. And if we can't find a place to site it, that does not meet the restrictions, then we either can't site it there, we can't put it there, or, you know, you have to look into the variance

process. But it couldn't be sited there if it can't meet the requirements; so, we'd have to go to another plan. It's as simple as that.

MS. JAN CAMERON: My name is Jan Cameron. I live on Lake Lakota Circle in Union Township. I'd like to back up a little bit and ask the question of EPA, is incineration the only method that you are willing to use at this point? In other words, I thought that you were proposing something to the community and then judging by what community acceptance would be, then go back and re-evaluate all sides of your proposals. Or, in other words, are you going to go ahead and carry through with incineration no matter what all of our concerns are? Have you made a definite decision that you're going to build that incinerator?

MS. CHERYL ALLEN: No matter --

MS. JAN CAMERON: No matter what we all think, like they did with the BFI incinerator?

MS. SHEILA SULLIVAN: As I mentioned, the eight criteria, we have already done a comparative analysis with, and with those eight criteria --

MS. JAN CAMERON: I know all about criteria. But answer a simple question.

MS. SHEILA SULLIVAN: No. It's just a preferred -- it's not cast in stone, no. It's just put forth as a proposal.

MS. CHERYL ALLEN: We'd like to take two or three more questions and go into public comments, please. Someone who hasn't had a chance?

UNIDENTIFIED SPEAKER: I'll save mine for public comment.

MS. JANE DOLE: Jane Dole, 607 Jasmine Trail. I don't fully understand why Alternative 5 is the preferred solution. You say you didn't do any risk assessments of the other solutions, so on what basis do you say that Alternative 5 is the preferred solution?

MR. FRED BARTMAN: I think this really relates back to a previous question. Alternative 3 is a capping alternative, and obviously there will be less risk associated with that compared to Alternative 5. That's the reason we did run the risk model to see -- to compare them, and we did factor that into our comparison.

MS. JANE DOLE: Did you do a basic model for 3?

MR. FRED BARTMAN: No. We didn't feel the need to.

MS. JANE DOLE: How could you compare them? I don't understand this.

MR. FRED BARTMAN: Well, it's --

UNIDENTIFIED SPEAKER: What did you use as a control?

UNIDENTIFIED SPEAKER: No action.

UNIDENTIFIED SPEAKER: They crossed their fingers.

MS. JANE DOLE: I do feel that this is a very, very basic question. Maybe I'm stupid, but at the moment I don't seem to have an answer, a very simple layman's answer, about why you think Alternative 5 is preferable to the others. At the moment you don't seem to be able to answer that question.

MS. SHEILA SULLIVAN: Well, the No Action Alternative is the control.

MS. JANE DOLE: Why is 5 better than 3?

MS. SHEILA SULLIVAN: Well, 5, one of the issues that is there is a statutory preference for a permanent destruction of principle threats. As I explained what a principle threat was, the National Contingency Plan stresses that to permanently destroy the waste is a preferred method over something that leaves it in place and let's it -- allows it to leach out or possibly leach out over a longer period. So, that's one of the big issues. I don't know if that --

MS. JANE DOLE: No, that doesn't answer my question. It is a natural, permanent solution.

MS. BETH GARYS: My name is Beth Garys. I have a general question about these creeks coming off of here. During the excavation period or incineration period, whatever,

I'm assuming at this point any of these creeks our kids should not be in or near the water -- in the water or, you say, also not in the creeks, I mean, at this time and for the next five or seven years or however long this takes?

MS. SHEILA SULLIVAN: Are you talking about the creeks on the site?

MS. BETH GARYS: Right. And obviously the water is flowing off there and going to be coming down further than just this site area.

MS. SHEILA SULLIVAN: Yes. Well, the surface water and sediment levels in the creeks off the site would not be a risk. Now, as to whether or not -- The excavation would be a very controlled process, as excavations go. I guess it also depends on how the excavation process is set up and what kind of engineering controls are put in place. That would happen during remedial design. But the way it's set up, it should not impact the creeks at all. That's what we would hope. But if there was a problem, we would advise people about that ahead of time if they should be concerned about that. But we don't foresee that.

MS. BETH GARYS: If we cap, it will probably be a problem later on, but if we incinerate --

MS. SHEILA SULLIVAN: Eventually over a long term there is less protection, over a long term.

MS. BETH GARYS: Because it's flowing down

and around this community, and of course it's going to flow down into other communities, particularly where we're going to be living. And there's a creek that flows right behind where we're going to be living, so I'm just wondering.

MS. SHEILA SULLIVAN: We would be doing surface-water monitoring. So, that's set up as a control to determine whether there's going to be problems. So, we'll be doing the monitoring and the results will be available. And if there was any problem or exceedance of a health risk, the residents would be advised as to what they should do.

MS. CHERYL ALLEN: We're going to take a couple more questions. Two more, please.

MS. KATHERINE STOKER: Katherine Stoker again. I have two questions. Number one, in your statement you say, "How does EPA evaluate clean-up alternatives?" And you include that, "a particular remedy chosen should provide adequate protection of human health and the environment, that the risk posed should be controlled through," et cetera, et cetera. Would you be perhaps considering picking up the cost of moving the children in Union School to other schools, in other words, providing Butler buildings at other schools to move the children out of that area during the course of your work -- well, during the excavation and whatever it is you plan to do?

And number two -- and this comes back to a

question regarding the choice of contractors for incinerating -- do you evaluate the criminal background of the contractors, make an evaluation? The reason I ask that is because two very large companies involved in handling of waste, (inaudible) and Health Management, Inc., have both paid tens of millions of dollars in fees, penalties and out-of-court settlements for violations of environmental EPA polution laws and Antitrust laws. And we have a problem here in this community with trusting companies like that since we have BFI down the street who appears to be breaking County, State and Federal EPA laws with impunity. So, we're worried if you let in somebody with a bad background, you're not apparently going to enforce -- I don't mean you personally. I know you mean well and you're working very hard on this -- Our problem is enforcement of the controls that the gentleman was speaking of, permits this and standards that and automatic shutoffs. And, sure, go down the street to Charter Park Drive and we'll show you permits and automatic shutoffs. It's not happening here.

The first question, are you going to pay for the relocation of our children for the months when you have the most active health risk? Was that included in the plan? Can it be included in the plan?

MS. SHEILA SULLIVAN: It could be included if the health risks exceeded an acceptable risk level, sure. But we wouldn't select an alternative where the health risk has

exceeded an acceptable risk level in the first place. So, we don't foresee that something like that would be necessary.

MS. KATHERINE STOKER: So, that's a "No", you've already determined that they aren't at risk there?

MS. SHEILA SULLIVAN: Right. But that will also -- I mean, right. As I say, we wouldn't --

MS. KATHERINE STOKER: Part 2, do you evaluate the criminal background of the contractors bidding on these jobs?

MR. BILL TROXLER: I can't answer that from the standpoint of -- I know there is precedent and that it has been done on other Superfund Sites. I'm aware of one site in particular where as part of the proposal process the proposed bidders have to disclose any environmental violations or fines corporate-wide over the past five years.

MS. KATHERINE STOKER: Evaluation doesn't do it. I can show you a list of BFI's evaluations over 70-feet long, and they still got their permit to burn down the street here. Just showing violations doesn't do a thing. Are you going to accept applications from contractors who regularly and significantly violate criminal laws? Don't talk about just making them list the laws. Are you going to accept them if they have those violations?

MS. CHERYL ALLEN: I can't answer that. That sounds like, to me, to be a legal question.

MS. KATHERINE STOKER: It sure is.

MS. CHERYL ALLEN: And I think that would be something that would be part of the criteria process, that we would look into the background of those contractors.

MS. KATHERINE STOKER: You have no problems evaluating them for capability and price, but you say you have nothing in place to evaluate them with respect to their criminal backgrounds; is that what you're saying?

MS. CHERYL ALLEN: No, I'm not saying that.

MS. KATHERINE STOKER: Didn't you say you were going to evaluate the contractors when they submit their bids with respect to whether or not they're capable of doing the job? I thought I heard somebody say that.

MR. BILL TROXLER: As part of the remedial design there is a proposal process; and as part of that proposal process there are certain criteria that the proposals are ranked on. Those sorts of issues can be considered in the proposal process, and there is precedence for that.

MS. KATHERINE STOKER: But there is not at this time and you don't have clearance to put it in?

MR. BILL TROXLER: At this point the remedial design has not been done. That's part of the process we're going through tonight, is to get input into that process. At this point there are no remedial design plans that would be that specific. But it is something that -- It has been done in

the past and there is a precedence for that.

MS. CHERYL ALLEN: One last question.

MS. KRISTIN SMITH: I'm Kristin Smith. I live at 5738 Golf Crest Drive. I'd like to defer my question. I have a very important question. I know that man has the same question. I'd like him to ask it for me.

MR. LAWRENCE BERKLEY: I don't know whether it's the same question. But has the date of the ROD been set? Can it be moved? And what would it take to move it?

MS. CHERYL ALLEN: As far as the date for the ROD, it has not been set. That's what this process is about. Based on the public comments we get here, then we go back and evaluate all those comments and all of that input. Then we make a decision on when that ROD will be signed.

MR. LAWRENCE BERKLEY: The point of my question is here we see a fairly benign site, it's not going to blow up, right, as far as we know. But what you can hear tonight are a lot of very deep concerns about certain technical issues that have been glossed over in the Feasibility Study, and it will take some time to get real answers to those questions.

For instance, on the point about explosives, there's only about two lines that say what is to be done about explosives on site. That is a very serious, serious issue, and it could affect the choice of the options that's

finally selected. And I don't see at the moment any evidence that those kind of issues are being adequately addressed, and I would strongly recommend that the date of the ROD be put off until all of those issues have been adequately addressed. In other words, we may well need other meetings of this kind so people can watch this process progress.

MS. CHERYL ALLEN: OK. We're going to take a five-minute break and then we're going to take your comments.

(Public Meeting stood in recess.)

(Public Meeting reconvened.)

MS. CHERYL ALLEN: We want to take comments, but we will be here at the conclusion to answer any questions. So, we won't be rushing out after we get your comments. When you stand up state your name and address for the court reporter for the public record.

MS. MELANIE WITTMAN: My name is Melanie Wittman, 8410 Darlene Drive, West Chester, Ohio, 45069. My concern is that to my understanding you don't really know what's in the waste fill; you're not sure at all about all the components that are going to be in there. But you're saying you might burn it. And my other concern along with that is when you dig the stuff up and you excavate, are you going to test it and stamp it before you burn it? Because according to EPA studies that I've looked into, a lot of these things become more toxic after you burn them.

And to my understanding also you're going to take all the ash that is more toxic than what you fed in and you're going to bury it right back where you got it from. And to me that doesn't sound like a solution; it's an air problem, a water problem and a landfill problem again. So, that's my concern.

MS. BETH HOWARD: My name is Beth Howard, 9740 Farm Crest Drive, West Chester. We've already got a land polution, water, and now we're going to have a land-excavation problem. I think it makes no sense to excavate the lagoon especially when the baseline assessment indicated that there is virtually no toxicity information available for many of the compounds that were found in the landfill, 166 different chemicals. They have kept saying all evening that the excavation of the lagoon is going to be the riskier thing that they're going to be doing. They're going to be bulldozing to remove the debris, operating with steam shovels. God forbid you hit something that's going to explode. I don't think the school children can be warned in time to get those kids away safely.

I have major problems with incineration. I think it's an outrage that you brought an incineration expert here tonight and have spent most of the evening trying to sell us on incineration especially in this community with what we've been through. I think that Option 3 which provides for the

ground water barriers and the capping seems to make the most sense. The site is not much of a hazard to the residents in its present dormant state. I think it should be left that way. I think the waste should be entombed on that site the way we do asbestos, keep it contained to the site, make sure the ground water and surface water doesn't leach out the contaminants, and leave it at that. I think the highest priority should not be treating the waste; it should be the health and safety of the current residents of this community.

MS. CHERYL ALLEN: Anyone else?

MS. KATIE PERSINSKY: My name is Katie Persinsky, 8595 Monticello Drive, West Chester. I agree with both of these ladies as far as I don't feel you do know what's in there adequately enough. I think that the Feasibility Study has definitely glossed over, bottom line, all the different options. From what I can see there were differences in the end result to a degree, but not enough to justify pumping it up into the air. And like she indicated, the ash can be just as toxic. So, it's just like if you cap what's there, you're probably going to be capping just as dangerous stuff in the end anyway, and meanwhile you're polluting the air.

So, I don't care who you are or where you live or how much money you have, everybody breathes air. You can't have an air-tight home. You can't get away from it. So,

people that push for this incineration stuff, it's like you're polluting the only thing that no one can renew. It's not like a ground spot that you can move away from. It's air. You all have to breathe it.

Further, I just wanted to stress again the issue about who is going to be doing all this stuff, not only who is going to be the incinerator. Obviously there are some very big misgivings as to several companies due to past problems and issues that are actually still going on. But who's going to be doing the excavating, too? We really need to have the ability to have a say in it. If you want these people to really accept your proposals, you really need to make us aware of who you're hiring to do this stuff; because there are just some people we don't trust and we don't want involved in this process.

MS. LISA WHITTAKER: My name is Lisa Whittaker again. I reside at 6976 Gary Lee Drive. As I stated earlier, I have been through the Feasibility Study and I do have a lot of problems with it. Again, I'm not angry with EPA. I'm angry with the consultants who put this study together for you. First of all, something that everyone needs to be aware of, sometime last year CLEAN had a meeting with EPA and Ohio EPA, and it was revealed at that time that incineration excavation was being considered at the site. And the consultants at that point were drawing up a Health Risk

Assessment not based on any kind of real parameters, but they were coming up with some figures as far as what public exposure would be. It was maybe July or August -- June, I think, of 1991 -- as a result of the figures that the consultants were putting together, EPA -- I believe Sheila Sullivan stated to me and Mark Lahar, former Ohio EPA Project Coordinator at the site, stated to me that EPA was concerned about the results, the figures that were coming up. And I've never seen that, what I call a preliminary health assessment. And I'm a little concerned why that was not included in this Feasibility Study. And I do understand it was not based on any real parameters, but EPA essentially went back to the consultant and said, "You need to make this look better on paper. The risk figures are too high." That's what I'm guessing they said. And essentially EPA drew up some parameters, "We'll excavate a smaller portion of the waste lagoon at one time." I would like to see that draft health assessment because eventually the entire waste pit is going to be open and we still will be exposed to that stuff regardless of what size you're taking out at one time. Eventually it's all going to be opened up. If there is any way that I could see that, I would certainly enjoy a copy of that.

There seems to be some concern about a school which is located on Cincinnati-Dayton Road. And I think this is a justifiable concern. Evidently the Ohio General

Assembly thought it was justifiable enough to pass a law, Ohio Revised Code 3734.05, which says that the Hazardous Waste Facility Board must do several things before they issue a permit. We're talking about permit process for a hazardous waste facility. And this is one of the listed regulations that the federally-paid has to comply with.

Now, EPA is not subject to the permitting process, but they do have to comply with all State and Federal laws. And what I would like to know is how EPA is going to meet the siting criteria of 3734.05 having to do with siting a hazardous waste facility within 2000 feet of homes and residents? I bet you can't answer that one.

Again, I have some serious concerns about whether the excavation is even feasible. And, of course, nobody really knows whether the Department of Defense wastes are on site. The only time that off-site treatment is mentioned in this study is as it pertains to either radioactive materials or Department of Defense waste. If we discover explosives or radioactive materials, those are suitable to put on a truck on the road, carry them off to supposedly incinerate, I don't know, treat them somewhere else.

Now, I told you before I'm an MB. When one of these things comes to your back yard you'll understand where I am. And I don't want this thing in your back yard any more than I want it in mine.

had two kids -- I asked my wife, "What would you do if we were going to send two kids to Union School?" She said, "I'd yank them out right away." We're begging you to help us. We can't turn to the other place. We turned to Ohio EPA, and they screwed us badly and are still doing it. So, we go to U.S. EPA, and I think we're going to have the same result.

You folks have to go back. We have some young people here. We have some older people with a lot of experience. You have a duty and responsibility to the constituency of this community. We're coming to you, asking you to protect our kids and community. You want to spend 30 million dollars? Fine, spend 60 million dollars, but do the job right; OK? These people are not idiots; they understand; they're American people who are seriously concerned and coming here at ten o'clock at night when they should be at home going to bed. It's your responsibility to analyze this. And in all frankness, folks, you don't know what's going on. You don't have answers for these people. That's not fair. They're entitled to have answers. Give us a break. We can't depend on our local officials. There's nobody protecting the people in our community, and you're the people that have to protect us.

The main thing, also, we don't have anyone from the school board now. We don't have anyone fighting for our kids. I don't have any kids in the school, but I'm concerned about 800 kids at Union Township. Some provision

should be made in the Superfund Site as part of the expense to let them go to private schools or bus them to Hamilton or someplace else; put them there for a year or two until the thing is finished. That's the basic responsibility you have to our kids and people here. Don't let us down. You've got to help us.

MR. LAWRENCE BERKLEY: Lawrence Berkley, 9972 Thornwood Court. I would like to just add to one of the issues that Carl raised about kids in the school. And that is that all of the risk assessments that we've heard tonight, as far as I can see, and having read through the Feasibility Study, the classical seventy-year dosage calculations -- what concerns me about this site are the short-term heavy doses as a result of an accidental fire or an explosion. And we have to take that seriously. And I know that EPA took it seriously, the risk of explosives being on this site; yet we see nothing in the Feasibility Study about those short-term, high exposure risks. And until we see some in-depth assessment of that, I don't think we should proceed forward with Option 5. Option 3 is a much more safe approach if you consider the people in the immediate vicinity.

MR. BRUCE SANTORO: My name is Bruce Santoro, 6443 Locust Street. I've got concerns about the well water. We're on well water also, and I'd like to know by the next meeting when you'll be testing the water and if that

But in 1989 the Ohio EPA drew up the Capacity Insurance Plan. And that plan -- the reason for the Capacity Insurance Plan was under circular law each state was required to show that they had sufficient disposal capacity for their own hazardous wastes. In 1989 Ohio EPA showed that the State of Ohio had more than enough capacity for our own hazardous waste for the next twenty years. Now, we import waste. We're a net importer of waste by about -- I can't even remember anymore. But the thing that I think is real interesting here is in the past what I've asked about off-site treatment. Certainly in this state there has to be a hazardous waste disposal facility which is not located within 2000 feet of a school.

I've lost my train of thought. A double standard is here. It's OK to bring in hazardous waste from West Virginia, Pennsylvania, Michigan, Illinois, New Jersey, just about anywhere I'd like to bring waste in; but it's unacceptable to take Ohio waste, put it on the road and take it to a hazardous waste facility which is RCRA-licensed. If there are no RCRA-licensed facilities, I'd like to know that.

In theory -- and I agree with the theory of incineration, it's wonderful, it will destroy all of the organic compounds -- there are problems that happen with incineration, as they happen with any other kind of equipment, I suppose -- the theory sounds wonderful and the practice is

really abominable.

We've got a state-of-the-art incinerator up the road with what I would assume to be the best available technology, otherwise EPA would never have approved of the application for that incinerator. And the fact is that Friday, last Friday, between 11:00 and 11:15 it's blowing out black smoke. And it happens often enough that we don't even bother to call the Air Pollution Control Agency because they come to the driveway and they don't know what they're talking about.

I found a Complaint that I filed. It was an odor of burning plastics. I first checked my home to see whether there was electrical wiring that was overheating. I didn't know what the odor was. I still don't know what the odor was. My odor Complaint ended up in the Sewer File. So, even when you have local authorities and local oversight, you know, it's no help. In reality the air pollution control devices are constantly breaking down; and that's why I say to you you've not presented me with your proposed equipment so I can comment on them individually. And I think what EPA would like for me to do is run out and look at all the different technologies, all the different air-scrubbing devices, and then come back and tell you which one I prefer; and then you ignore my comments, anyway.

But it's a fact this thing should not operate with any less than two scrubbing devices on it. I

truly am disgusted with this Feasibility Study. I don't think that I can express that enough. Something which I find interesting and maybe it has no bearing on the remediation of this site, EPA failed to characterize the waste. Is it hazardous waste? We think so. If it's a hazardous waste, then most definitely it should be stored and should have been stored in a RCRA-licensed facility under the guidelines of the Resource Conservation and Recovery Act. I think -- you know, I'm hoping at some point EPA will characterize the waste and I'm sure this will be something addressed in the design stage as well as all the other comments. I would really like to see EPA go back, fill in the blanks on this Feasibility Study, give the public the opportunity to comment on the Feasibility Study, and then allow us to comment on the proposed plan. Give us what you're basing your plan on, give us that information so that we can make an educated either approval or criticism of your plan.

Thank you for listening.

MS. JACKIE GORDON: My name is Jackie Gordon and I live at 9842 Talltimber Drive. I'm not nearly as informed as some of the people seem to be, but it seems if we excavate this ground and then incinerate, we're going to have airborne particles, contaminated particles, in our air. As far as I know, nobody has given us any indication of how far these contaminants will travel, if they're going to

settle in the ground, in the water. We're being told that the ground water is not going to be polluted, but this stuff has to come down somewhere. Is it heavy? Is it going to land close to the facility? Is it going to travel? I don't know.

I also know from my own business background that the State tends to promulgate rules and regulations and provide inspectors for things, and, you know, there aren't enough inspectors. They don't show up. They're supposed to come anually at my husband's business, and you see them twice in a fifteen, sixteen-year period. I don't trust anybody policing this facility. I'm not sure how I think it should be handled, but I have serious concerns about contaminants in the air.

CARL MORGENSTERN: Carl Morgenstern, 5759 Woodbridge, West Chester. We're in a curious predicament here. We don't have any public officials that are fighting for the people. You have seen a lot of people talk here; and they're very bright, smart, intelligent people, in spite of what everyone else says of all the people who come here. They ask simple questions. And in all honesty, you can't answer them. That's not the way to conduct a public hearing. We can't go -- the people here cannot go to our trustees; they're not concerned with helping. We can't go to our commissioners; they're all developers. We can't go to Governor Voinovich; he's not an environmentalist. We have no place to turn. If I

will be on a regular basis, the date that the City water will be hooked up? And also will you be taking steps to provide bottled water for the community, for the citizens of the community who are on well water right now? And also when is the next meeting so that we can know when this is going to take place?

MS. KATHERINE STOKER: My name is Katherine Stoker, 6979 Hidden Ridge. I would like to say that I am very concerned, and I hope that you will be concerned about the lack of confidence which is being expressed here. We went through a very similar routine with the hearings from the Ohio EPA for the BFI's infectious medical waste permit. We had the experience of sitting there -- hundreds of people turned out, voiced their concerns; the members of CLEAN got up and cited chapter and verse from Ohio Revised Code. And it became apparent as months went by that the whole purpose of the hearings was for the people to come down, voice their concerns so that they could feel as though somebody listened; but no effect was made on the decision. It became apparent that all decisions were made beforehand and out of sight and people's comments carried no weight.

As an example of that I would like to use Mr. Silverman's -- Right, Fred Silverman? Fred, what's your last name?

MR. FRED PARKER: Parker.

MS. KATHERINE STOKER: I'm sorry -- Fred's comments, that, because in their sample excavations and borings they had found no munitions, so therefore they decided there were no munitions and totally disregarded it. That's frightening to me. There are people in this community who know far more what is in that lagoon than you do. Now, these people have come, members of CLEAN, and privately expressed these concerns and actions of things that they have firsthand knowledge of but are afraid because of personal reasons or financial reasons to express them publicly and admit to them. And because it didn't fit in, apparently, with your agenda, it appears to be getting sloughed off. The problem is you people are in Chicago; am I right? We're right here. If something blows up, you guys are in Chicago. We're playing You Bet Your Life right here in West Chester.

UNIDENTIFIED SPEAKER: Chicago is not such a great place to me, either.

MS. KATHERINE STOKER: We need to feel your concern. We went through this whole permitting and hearing and exercises before and discovered that county, state and federal laws were totally disregarded with impunity. We have the incinerator down the road, "State-of-the-art, not to worry." It's breaking down all the time. It is constantly in violation, regularly in violation, direct violation. But does anything still happen? They're still burning the stuff,

emitting mercury, and it's jogging right along. Nobody is protecting us there. There are laws that say that place should shut down. When it is these kind of violations you say, "Don't worry. We have laws. We have permits. We have safety procedures. We have regulations." I'm sorry, we have seen the U.S. and the State EPA regulations at work and it's no regulation.

So, there is a real problem of trust here. We want to trust you, but right now we don't want to bet the lives of our children that we can trust you. We need something more from you, not just from you, but from the regulatory agencies as a whole. We need to have you -- and when I say "you", I'm talking about the U.S. EPA; I'm talking about the State EPA -- enforce your laws. Don't come to us and say "trust us", when we can see what you're not doing down the street that you should be doing. We can't trust you. We would like to. We want to. We need to. But many of us don't because we have the evidence right down the street that we cannot. We cannot trust our local trustees to help us out. We can't trust our County Commissioners. Let's see a show of hands of elected officials here in the room? Elected officials? Elected officials? Dick Aldridge promised to insure a safe environment in his acceptance speech in the paper. Where is Dick Aldridge?

Members of CLEAN? How about members of

CLEAN who have been working? We have a real credibility gap here. And my heart is not warmed when I hear Fred say, "Well, OK, a couple of flame throwers." But there weren't any munitions there? I'm worried. My child doesn't go to Union, but if he did I'd be making plans to put him someplace else. And I would like to see you include in your plans either the funding of children to the local parochial schools or funding for Butler buildings or other buildings to move those kids out of that Union area. They were building a school anyway; move those children into some other area. Because I don't want to bet the lives of the children of this community that there are no nerve gases or explosives; and they are too precious.

And like I said, we have a real credibility problem, and I'm worried and I think a lot of other people are worried. And I don't hear from you any apparent realization that this concern is here.

MR. MARK LEEHART: My name is Mark Leehart. Up to May 1st I was the Site Coordinator for Ohio EPA working on the Skinner Site. I currently work outside the Agency with a private consulting firm; and I'm actually very sorry I was not able to stand up here to give you some background or information from the State of Ohio's point of view.

From my personal experience working with the site -- You guys had a lot of questions that may or may not have been answered. And from my own personal viewpoint of

working on the site and knowing that -- at least on the surface I've been told that CLEAN at least has a little bit of faith in me, I can say that I personally believe this remedy is a very good one, notwithstanding the fact that I did work on it. Each of the remedies that you've heard or were informed about with the exception of the No Action Alternative -- each of those remedies were looked at based on risk. Even though they weren't looked at as far as a single Risk Assessment, those alternatives were each designed to meet the one in one million criteria for the safe level that the State and the Federal Government considers adequate as far as cancer risk. Each of those alternatives, whether any one of them would be chosen -- each of those would meet that criteria. It's a matter of degree afterwards which of those alternatives is going to be better. Whether you just cap it, you're still going to meet the one in one million criteria. If you incinerate it, it's going to be better than that because you're going to be removing a major source of the problem; and instead of your children's children having to worry about some ground water getting out of the landfill which was only capped and the cap was breached and now materials are again moving to Mill Creek, maybe by incinerating the vast majority of that material where we know it's located at we can say that several hundreds of years from now there may be a problem, but by that time, who knows, maybe the stuff will have naturally biodegraded or

whatever.

But a lot of questions have been raised on this issue of incineration. A lot of that stuff is not that finely detailed as far as the design of the system. We know the system is going to work. We know what the chemicals are out there, we know the system will handle those chemicals. We know what things need to be added to the incinerator as far as, yes, we know we're going to need scrubbers or some type of air emissions control. We know there will be metal left over afterwards in the ash and those levels will be solidified afterwards and put back into the landfill where they will become immobile. Some metal will volatilize and we need to capture those.

There's a lot of questions to answer. And I would encourage everyone here to look to the details that need to be resolved on this Alternative and understand that while we can't -- not "we" anymore -- they can't give you all the answers that you're really looking for at this point in time, please understand that out of everything that we look at, while it wasn't finely detailed in the Feasibility Study all the pros and cons of each of the technologies we have -- we could have looked at -- or each of the technologies we could have put in series to clean-up the site, understand that incineration is the best alternative with respect to removing the most contamination possible and making it safer for you

guys down the road.

MS. DOVE LONG: My name is Dove Long, 6354 Melrose Way. I'm concerned about the confidence the EPA is using in saying that it's certain that the incinerator will take care of the problem, will take care of the compounds that are in there. If they found flame throwers -- they won't even tell us where -- they don't know what's in there. If that's the truth what's in there, fine. But they don't know what's in there. So, until they do more probing and really understand what's in there, I don't think that any solution can be termed truly feasible.

Also, this seems to be our last chance to say what we think about this. We've come up with all these questions tonight and they're telling us -- this nice gentleman told us that we should be concerned, we should continue to look into how they answer these questions in the design review or design study, whatever. If we're not going to have a chance to respond to those, it doesn't make any difference. We need to have an opportunity to say, "Hey, this doesn't sound right to me. I've seen questions on this." If this is our last chance, we're not going to have it. Please give us another chance.

Thank you.

MS. CHERYL ALLEN: Anyone else?

MR. DAVID GULLY: My name is David Gully, 7817 Plantation Drive. I would agree with the last lady that

spoke. I would say that because of the questions that weren't answered this evening, it would be useful to the community if we could get answers to some of these questions and then have another opportunity to make comment on them.

One of the concerns I have is that since you don't really know what's in the subsurface of the site, you start excavating in there, if there is an incident on the site, the Township is going to be the first responder to the incident, whether it's an explosion or a fire or a cave-in or something like that. And I'm real reluctant to send our people in there if we don't know what's there, if you don't know what's there.

Additionally, I wonder if -- There's no fire hydrants that I know of on the site. If there is a fire there -- you're introducing fire to these. This is an incinerator -- if there is a fire with the incinerator or the soil catches on fire, how is that going to be dealt with? I don't see where that's been considered at all. I'd certainly like to see these questions answered, give us a chance to evaluate the answers to the questions, and then have another opportunity for public comment.

MS. CHERYL ALLEN: Any more comments?

MR. MARCE OSNER: Marce Osner, 8700 Cincinnati-Dayton Road. I am closer to the site than the school. I don't know what all the answers are, but I would

hope you have a copy of the 1976 court settlement that was made in Hamilton as giving details of what's in that. There is facts and figures of what's in there.

I disagree -- or I don't say I disagree -- I have a little different opinion than what most people have here. I see there is no trust of the EPA for the past things and there probably never will be. And I don't care what answers you bring back here to certain questions. Some of these people will never trust you anyway, I'm sure of that. But my thinking is this. According to the Court suit in 1976 it went into detail as to some of the things that are in there and it will tell you in there that certain things in there apparently are segregated at this time. And the place where they become dangerous is when they get together and mix and form something else.

Now, if you're going to do anything with it, I think it has to be done pretty quick. You take 1976, that's sixteen years ago. The drums are going to be mighty thin or else they're already ruptured in that ground. That lagoon is not far from the East Fork. It sits up the hill from the East Fork. Now, if that's going to get down into the water and come down to East Fork, that can go clear on down and do a lot of contamination.

Also in that 1976 court case it told in there about the same things you people said here, about

possibility of cancer causing from that. Now, I've been there all that time right next to it and I'm not too happy that it's there. I'm very unhappy it's there. But I'm also wondering which is the biggest chance, to keep continually delaying the operation, or getting in there and taking the chance and getting it out of there? I think people are going to have to realize -- or at least I realize that -- I don't care if they wait ten years for you people to come back with answers, you're not going to come back with all the answers and there's no way that anybody can guarantee us of everything that you're going to find in there and all the problems they're going to hit. And I don't care if they go in there and do more checking, there's things that might be in there that you won't find.

And if the people here are wanting an ironclad decision of what's going to happen and have all the answers from you people, then you better just leave it alone and gamble down the road. But if anyone has ever went to any of these meetings put on by the Water Conservation Agency -- I believe that's the name of it -- out of Columbus -- I attended one in Cincinnati -- of all the wasteland in this country, due to the fact that these type things are sitting there and nothing done about them, which is the greater risk, that we wait to try to get ironclad answers to every question so we make everybody happy, or we sit there and let it erode and something develop out of it that you may not be able to stop

once it starts? And I would certainly think that a lot of thought ought to be given by everybody as to what we should do with it and naturally convert all the mistrust here.

And I can't deny some of it is valid, but I would say we got to get our heads together real quick, we either do or don't, because those barrels are probably ruptured by now and who knows what they're getting ready to mix together and get into that water stream. Once it gets into the water stream it's ruined, there's no way you people or anybody else can get in the ground. Look at all the water that lays there. If there's any possibility of that going on now and getting into the big water aquifer down here -- there might not be any chance of that, I don't know. I don't know that much about the ground. If you're not aware, the biggest water aquifer in the State of Ohio lays right down here off of Windisch Road. Now, if for any reason something like this would ever get that far and contaminate that, then you really got problems, you will destroy one of the biggest water reservoirs in Southwest Ohio.

As I say, that may not be possible, I don't know, but it's a potential, and all it would take was a little earthquake or something to crack the ground. And I recall when they put I-75 in and I had a well in my side yard; they made three blasts on the hill, and my well went dry. So, no one can tell me that a few rumbles of the earth can't change the flow of the water in a darn big hurry. If something like that ever

happens or something out of there gets into that East Fork, we've got more problems than we're talking about here tonight.

So, I don't know what the answer is, but I think people are going to have to realize if they're ever going into that thing, there's chances. And if there are anybody sitting here tonight that think that you people are going to give us a 100 per cent guarantee of something, you might as well forget it because it's not possible; you're going into some unknowns, and when you go into unknowns you have potential of problems that you don't know what's in there. And I don't care how much precaution we take or what, there's no way to guarantee to the people in this room that there's 100 per cent safety. So, I would say to the people that are in here that are looking for 100 per cent safety, it's not going to be. And as I say, I'm closer to that -- I'm the closest house, I think, to that site and I am willing to take my chances, that it ought to be gotten out of there for the good of the community.

And I would close.

MR. CARL MORGENSTERN: Why didn't you stop Skinner from putting it in there?

MR. MARCE OSNER: Let me tell you, Mr. Morgenstern, I fought that god damn thing from the day they started putting it in there and I was in Court more than anybody else in Union Township. And at the time that we went in there we couldn't stop it. And I can tell you on the

outside why it wasn't stopped.

MR. CARL MORGENSTERN: OK. I checked the 1976 --

MR. MARCE OSNER: Don't tell me that no one fought that because there was reasons that it wasn't stopped and I know what they were.

MS. SHIRLEY FARMER: Shirley Farmer, 7249 Hamilton-Mason Road. This happened sixteen years ago. I know it was reported numerous times to you people many, many years ago. Isn't it sad that we are here sixteen years later; you're worrying about our trust in the EPA? This is why there's no trust. It was reported. We wouldn't have that much contamination there if they had stopped it. We told them, but nobody cared; and now we'll probably come back many years later with BFI with the same problem.

MS. CHERYL ALLEN: Anyone else? I guess we'll close here. We'll be around to answer questions. And I will be letting you all know when we'll be having the incineration workshop. We'll be notifying you as to when the incineration workshop will be within the next couple of weeks.

(PUBLIC MEETING CONCLUDED AT 10:10 P.M.)

C E R T I F I C A T E

I, Kelly A. Graff, a free-lance court reporter in Hamilton, Ohio, do hereby certify that the preceding 94 pages were recorded by me in stenotypy and transcribed into typewriting and are a true and accurate copy of my stenotypy notes.

Commission Expires 12/1/94